

WOMEN IN COMBAT ARMS: A STUDY OF THE GLOBAL WAR ON TERROR

A Monograph

by

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ABSTRACT

WOMEN IN COMBAT ARMS: A STUDY OF THE GLOBAL WAR ON TERROR, by Major Seneca Peña-Collazo, 60 pages.

The recent institutionalization of women in combat reignites a long standing debate on their roles in the military; a debate that elicits emotionally charged responses by proponents and critics alike. While much of the current discourse concerns hypothetical discussions of women in direct combat, there is a population of female soldiers that have contributed as front line “trigger pullers” throughout the course of the past 12 years of war in both Iraq and Afghanistan. These women are Army aviators who have served in attack aviation roles, without restriction, since the beginning of major combat operations in the Global War on Terror.

Given the significant implications of the political, social, cultural, and economic ramifications of women in combat, this paper synthesizes historical evidence and statistical data of female pilots’ performance within attack aviation over the span of the past two conflicts in the Middle East. This research shows that over a decade of females serving on the front lines alongside their male counterparts, there is no significant stigma or other prohibitive factors that would degrade the effectiveness or lethality of combat arms units in war.

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ACRONYMS

AFHSC	Armed Forces Health Surveillance Center
AIPH	Army Institute of Public Health
ARB	Armed Reconnaissance Battalion
ARSOAC	Army Special Operations Aviation Command
CAB	Combat Aviation Brigade
CENTCOM	Central Command
CRC	Combat Readiness Center
DMDC	Defense Manning Data Center
DoD	Department of Defense
DoDSER	Department of Defense Suicide Evaluation Report
FY	Fiscal Year
GWOT	Global War on Terror
KIA	Killed in Action
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OND	Operation New Dawn
PPE	Personal Protective Equipment
SAPRO	Sexual Assault and Prevention Office
WIA	Wounded in Action

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INTRODUCTION

The recent institutionalization of women in combat reignites a long standing debate on their roles in the military; a debate that elicits emotionally charged responses by proponents and critics alike. While much of the current discourse concerns hypothetical discussions of women in direct combat, there is a population of female soldiers that have contributed as front line “trigger pullers” since the wars in both Iraq and Afghanistan began 12 years ago. These women are Army aviators who have served in attack aviation roles, without restriction, since the beginning of major combat operations in the Global War on Terror (GWOT). An understanding of the arguments defining the debate of women in combat coupled with an in depth analysis of this population as they have performed in both Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF), will provide quantifiable data to inform the current debate and resolve some of the dissension regarding the role of women in combat arms.

Why do we care?

Several important factors are at play when considering the direct and second order effects of women in combat aviation. As the U.S. Military enters another cycle of troop reduction and fiscal constraint following wars in the Middle East, senior leaders seek strategies for force management that provide the requisite capability as a vital component of national power. People are the single greatest expense within the Department of Defense (DoD), and as such, leaders must ensure that the most qualified applicants are serving in both combat and leadership positions.¹ Within the U.S. Army, aviation procurement expenses alone account for \$6.3 billion

¹The cost of military pay and allowances, combined with military health care, comprises about one-third of the Department’s budget. These costs have been growing rapidly in recent years – up almost 90 percent since FY 2001 (about 30 percent more than growth in inflation), while active duty end strength has grown by less than 3 percent. These costs increase when Overseas Contingency Funds are factored in to support Soldiers conducting operations in Afghanistan and Iraq. Office of the Under Secretary of Defense (Comptroller) / Chief Financial Officer, *FY2013 Budget Request Overview* (Washington, D.C.: Department of Defense, February 2012), 1-2,

of the total \$184 billion FY13 allocations.² This percentage is significantly increased when accounting for pay and allowances for aviation personnel, operation and maintenance funding both within the United States as well as Overseas Contingency Operations (OCO), and Research, Development, Test, and Evaluation (RDTE) costs; collectively making Army Aviation the most expensive branch within the U.S. Army.³ In a 2013 address to senior aviation leaders, the Training and Doctrine (TRADOC) Commander, General Robert Cone, stated that similar to the 1973 Army, today's Army is at an inflection point driven by several factors: a new era of fiscal austerity, the end of wars in Iraq and Afghanistan, changes to defense strategy, decreasing military manning, and decreasing operational tempo (OPTEMPO).⁴ Simultaneously, the future will be more dangerous for Army Aviation for two reasons: ambiguous threats that leverage advances in technology, and Anti-Access / Area Denial (AAAD) operations that focus on countering the combat multiplier effect that U.S. Army Aviation brings to the fight.⁵ Within the framework of this strategic and operational context, aviation will be in higher demand due to its capability to conduct mobile operations over greater distances and difficult terrain to support potentially non-contiguous operations. Therefore, aviation will play a key role in mitigating the

http://comptroller.defense.gov/defbudget/fy2013/FY2013_Budget_Request_Overview_Book.pdf (accessed February 13, 2013).

²Assistant Secretary of the Army for Financial Management & Comptroller, *FY13 Budget Overview Briefing* (Washington, D.C.: United States Army, February 2012), 10, <http://asafm.army.mil/Documents/OfficeDocuments/Budget/BudgetMaterials/FY13//overview.pdf> (accessed February 18, 2013). Also see, C. Todd Lopez, "Army Rolls Out 2013 Budget Request," The Official Homepage of the United States Army, <http://www.army.mil/article/73769/> (accessed February 18, 2013).

³*Ibid.*

⁴General Robert W. Cone, "Army Aviation Symposium and Exposition" (conference, Gaylord National Hotel and Convention Center, National Harbor, MD, January 9, 2013).

⁵*Ibid.*

risk of a smaller Army.⁶ Lastly, the pending integration of females into the “warfighting” battalions of the 160th Special Operations Aviation Regiment (SOAR), beginning in FY13, will signify a watershed moment for the special operations community - a moment that will continue to keep the role of women in combat arms as a topic of discussion, even with the looming drawdown of forces within the Middle East.⁷

Thesis

Given the significant implications of the political, social, cultural, and economic ramifications of women in combat, this research will synthesize historical evidence and statistical data across a broad and comprehensive range of factors to answer a critical question regarding the future of the U. S. Military. Specifically, an analysis of female pilots’ performance within attack aviation is examined over the span of the past two conflicts in the Middle East. This research will objectively determine the validity of the initial hypothesis, that women in combat do not degrade the lethality and effectiveness of direct combat units. Officially, women have served during combat in attack aviation units, without any restrictions, since 1994.⁸ Senior Army leadership consistently maintain that the Aviation branch, as a whole, has become better due to “trial by fire” over the past 12 years.⁹ This research shows that over a decade of women serving in direct

⁶Ibid.

⁷Joe Gould, “Army Oks Women as Spec Ops Aviators,” *Army Times*, January 11, 2013. <http://www.armytimes.com/news/2013/01/army-oks-women-specops-aviators-011113w/> (accessed February 26, 2013).

⁸United States, *Hearings On National Defense Authorization Act for Fiscal Years 1992 and 1993--H.R. 2100, and Oversight of Previously Authorized Programs, Before the Committee On Armed Services, House of Representatives, One Hundred Second Congress, First Session: Department of Energy Defense Nuclear Facilities Panel Hearings On Department of Energy Defense Programs: Hearings Held February 28, March 6, 13, 21, April 11, 18, and June 18, 1991*. (Washington: For sale by the U.S. G.P.O., Supt. of Docs., Congressional Sales Office, 1992).

⁹In the 2013 Senior Leaders Aviation Symposium hosted by AUSA, the TRADOC Commander General Cone, stated that “Army Aviation has performed brilliantly during the last decade of war.” This sentiment has also been echoed by the Commanders of: the Army Special Operations Aviation Command

combat alongside their male counterparts, there is no significant stigma or other prohibitive factors that would degrade the effectiveness or lethality of attack aviation units in combat. With technology making warfare increasingly a remote task, the belief that women are unable to effectively perform in direct combat roles is becoming an obsolete paradigm that will fade into obsolescence.

LITERATURE REVIEW

To adequately examine this specific population of female attack aviators' performance in combat there are several topics that must be addressed to provide the appropriate level of historical and contextual background. This literature review will focus on three major areas: 1) rules and policies governing the service of women in combat, 2) the topics surrounding the women in combat debate, and 3) a demographic snapshot of women in aviation today. The policy review will address the legal expansion of the role of women in combat and highlight that evolution since World War II, especially as it pertains to aviation. The various topics that comprise the current debate surrounding the issue of women in combat will be given a brief treatment, highlighting the major arguments of both critics and proponents. Lastly, the demographic snapshot will reflect the results of the policy evolution and prevailing themes highlighted in the women in combat arms debates. The synthesis of major themes within these two areas is essential to gain a holistic perspective of this debate and will serve to provide a contextual background for the analysis presented later.

(ASOAC), 160th SOAR, and the Aviation Center of Excellence (AVCOE). See Appendices A – C.

Historical Evolution of Policy Expansion

In order to properly frame the discussion of women in combat, it is essential to obtain a clear understanding of the evolution of law that has contributed to the current policy as it stands today. To that end, this analysis will begin with policy during WWII and the major directives, legislation, and court decisions that shaped the roles of women in the armed services today. That discussion will conclude with definitions for key legal terms in order to frame the examination of the various topics which comprise the women in combat debate.

For the purpose of this research, the historical policy discussion will begin with the Armed Forces Integration Act of 1948. This legislation served to formally and permanently recognize the contributions of women in the armed forces by creating personnel authorizations within each of the services during peacetime, instead of only in periods of war.¹⁰ This act was highly prescriptive and limited with regard to the small percentages of authorizations being allocated for women and limiting their rank advancement to Lieutenant Colonel, or the O-5 equivalent in the other military services.¹¹ While this was a major step for the Women's Army Auxiliary Corps (WAAC), there were still many restrictions on their service. For example, prohibitions still existed for women serving aboard aircraft or ships that could potentially engage in combat, and married women could not receive a commission as an officer if they had any dependents under the age of 18 – highlighting an example of the longstanding issues with family and retention that exist today.¹²

¹⁰Bettie J. Morden, *The Women's Army Corps, 1945-1978* (Washington, D.C.: Center of Military History, United States Army, 1990), under "Chapter 2," <http://www.history.army.mil/books/wac/chapter2.htm> (accessed February 26, 2013).

¹¹Ibid. The number of enlisted women was limited to 2% of enlisted strength and the number of female officers (excluding nurses) to 10% of enlisted female strength.

¹²The WAAC was founded in 1942 as a quasi-military organization of 150,000 women to fill clerical jobs that the Army would otherwise give to enlisted men. Ibid., 5. For officer qualifications see,

The decades following WWII saw the Civil Rights and Women's Liberation movements gain political and social traction across the United States; and similarly progress was made in expanding the role of women in the military. The military witnessed the institution of the Defense Advisory Commission on Women in the Service (DACOWITS) in 1951, and the Civil Rights Act of 1964 – requiring all persons are to be treated fairly and have equal opportunities in all phases of employment without regard to characteristics such as race or sex.¹³ In 1967, Public Law 90-130 removed any restrictions on professional achievement and personnel percentage authorizations, which was previously enacted by the Armed Forces Integration Act in 1948.¹⁴ However, the expansion of the social roles of women was not without drawbacks - as evinced by the failure to ratify the Equal Rights Amendment in 1972.¹⁵

The confluence of an unpopular war in Vietnam occurring concurrently with the U.S. Military transition to the All-Volunteer Force (AVF) in the early 1970s triggered an aggressive expansion of women and their roles within the armed services.¹⁶ The difficulties in recruitment

Ibid., 57.

¹³U.S. Defense Advisory Committee on Women in the Service (DACOWITS), "Charter," DACOWITS, <http://dacowits.defense.gov/Charter/> (accessed February 27, 2013). DACOWITS' charter is to examine and advise on matters relating to women in the Armed Forces of the United States.

¹⁴U.S. Department of the Army, G-1, Human Resources Readiness Division, "Women in the Army - Historical Highlights," Women in the Army, <http://www.armyg1.army.mil/hr/wita/docs/women-army.pdf> (accessed February 27, 2013).

¹⁵The Equal Rights Amendment (ERA) states, "Equality of rights under the law shall not be denied or abridged by the United States or by any state on account of sex." This amendment, initially proposed in 1923 came closest to being ratified in 1972. It was defeated by a conservative women's movement – most notably lead by Phyllis Schlafly – that feared the amendment would, among other things, require women to be drafted into military combat any time men were conscripted. Interestingly, enough the ERA has been presented every year since 1972 and has yet to be approved by Congress. Phyllis Schlafly, "Equal Rights' for Women: Wrong Then, Wrong Now," *Los Angeles Times*, April 2007, <http://www.latimes.com/news/opinion/commentary/la-op-schafly8apr08,0,915647.story> (accessed March 2, 2013). Also see, Carolyn B. Maloney, "Rep. Maloney, Sen. Menendez Reintroduce Equal Rights Amendment," Press Release, <http://maloney.house.gov/press-release/rep-maloney-sen-menendez-reintroduce-equal-rights-amendment> (accessed February 27, 2013).

¹⁶U.S. Library of Congress, Congressional Research Service (CRS), *Women in the Armed Forces:*

and retention across a wide spectrum of occupational specialties within the enlisted ranks led to a break down in occupational barriers for women in order to meet with shortfalls in positions that had historically been coded only for men.¹⁷ The expansion was mirrored within the officer ranks as well, with the enactment of Public Law 94-106 which resulted in the inclusion of women into all service academies: Air Force, Naval, and the Military Academy at West Point in 1975.

Still, the reticence to allow women to participate in combat pervaded the thinking of senior leaders and policy makers. In an attempt to mitigate any potential exposure for the large increase of women now serving in the military, DoD adopted a “risk rule” in February 1988. Under the parameters of this policy, women were to be excluded from non-combat unit missions if there was a greater risk to being exposed to direct combat than the combat unit they supported. Therefore, they were allowed to serve in units or on missions so long as the combat unit that they were supporting was put at greater risk to come under hostile fire than the unit that they were currently serving with.¹⁸ It was under these guidelines that the U.S. Military entered into the Persian Gulf War in January 1991. This reticence to allow women to serve during this time period would have a direct correlation to the potential advancement of women to senior leadership positions which combat experience, or lack of combat experience, is a discriminating factor.

Two key events triggered a heated political debate on Capitol Hill: 1) the success of women in Persian Gulf War, where female soldiers were seen serving in logistics bases forward of all-male combat arms units, and 2) the political fallout from a widely publicized sexual

Issues for Congress, by David F. Burrelli, CRS Report R92008 (Washington, DC: Office of Congressional Information and Publishing, December 12, 1996), <http://www.fas.org/man/crs/92-008.htm> (accessed February 13, 2013).

¹⁷Ibid.

¹⁸Ibid.

harassment at the 1991 Tailhook convention in Las Vegas.¹⁹ A movement in Congress was put on the floor by Congresswoman Patricia Schroeder (Democrat, CO) to expand the role of women in combat and repeal the restriction on women flying combat aircraft. The ensuing debate did result in legislation being passed, but with the caveat that a commission be created to, “study the legal, military and societal implications of amending the exclusionary laws.”²⁰ The commission met and after eight months of research, they made recommendations on 17 different areas. The most critical recommendation for this research lay in their findings on “the circumstances in which women might be assigned to combat positions.”²¹ The ensuing landmark policy was articulated in the Defense Authorization Act for FY1992 and FY1993 and codified as Public Law 102-90.²² Just a short two years later, on January 14, 1994, then-Secretary of Defense Les Aspin announced that the risk rule would be lifted. The new rule would be replaced by the following three criteria of direct ground combat, all of which would have to be met to exclude jobs from women: “Women may not serve in units that engage an enemy on the ground with weapons, are exposed to hostile fire, and have a high probability of direct physical contact with the personnel of a hostile force.”²³ In May, the Army opened over 9,000 positions to women; resulting in three

¹⁹U.S., *The Presidential Commission On the Assignment of Women in the Armed Forces: Report to the President, November 15, 1992*. (Washington, DC: For sale by the U.S. G.P.O., Supt. of Docs, 1992), iii; For information on the Tailhook scandal see, Norman Kempster, “What Really Happened at Tailhook Convention the Pentagon Report Graphically Describes How Fraternity-Style Hi-Jinks Turned Into Hall of Horrors.: Scandal,” *Los Angeles Times*, April 24, 1993. http://articles.latimes.com/1993-04-24/news/mn-26672_1_tailhook-convention (accessed March 3, 2013).

²⁰Ibid.

²¹The Commission determined that given the various examples of women performing in combat through the history of the nation, the “American experience does not preclude assigning capable women to direct combat positions for which they are qualified.” Ibid., 22.

²²Ibid., iii.

²³Les Aspin, “Direct Ground Combat Definition and Assignment Rule.” Memorandum for Secretaries of the Military Departments. Washington, DC, January 13, 1994.

women being directly assigned to tactical attack aviation units. On July 29, 1994, new Secretary of Defense William Perry announced that the military would open more than 80,000 additional positions to women, with more than 92% of all career fields and 80% of the all jobs becoming open to women that year.²⁴

And yet with all the gains made, there were still heavy restrictions placed on the potential roles that women could fulfill in combat. Public Law 103-160 mandated that a 30 day notice be given to Congress prior to changing any personnel policy which would allow women to be assigned to any combat unit that still remained closed under the 1994 edict. It also required a 90 day notification to Congress before making any changes to the ground combat exclusion policy, to include changes in categories of units or positions open for women.²⁵ The officer career fields that remained closed to women consisted of armor, infantry, special forces, and some field artillery and air defense artillery assignments.²⁶ What is key to note is that these specialties have traditionally been among the most critical routes to senior command positions and comprise the bedrock of the combat arms. Therefore, they are simultaneously viewed as the positions of greatest significance to national defense.²⁷

It was under these policies and laws that the U.S. Military entered into the global war on terror after the attacks on September 11, 2001. Once again faced with a national crisis, the traditional restrictions on women in large conventional wars were redefined. No longer were the

²⁴Burrelli, *Women in the Armed Forces*, 1996.

²⁵*Ibid.*

²⁶*Ibid.*

²⁷Lance M. Bacon, "Odierno Backs Expanding Role of Women in Combat," *Army Times*, October 22, 2011. <http://www.armytimes.com/news/2011/10/army-ray-odierno-endorses-expanding-women-role-in-combat-102211w/> (accessed March 5, 2013). Eighty percent of general officers are drawn from career fields that are closed to women; Also see, Morton H. Halperin, with the assistance of Priscilla Clapp, and Arnold Kanter, *Bureaucratic Politics and Foreign Policy* (Washington: Brookings Institute Press, 1974), 55.

front lines clearly delineated as portrayed in the doctrine. A new, non-contiguous battlefield became the norm. Gone were the front lines, which had remained within the sole purview of combat arms. The Army shifted to a counterinsurgency fight, and the particular skill sets and utility of women would come to be relied on heavily during this particular war. Women were often recognized for their heroism, with two earning Silver Star medals.²⁸ The relevance of ground combat rules needed to be reexamined based on the new operational environment that the U.S. Military found itself in. A renewed interest by policy makers to review and potentially redefined the role of women took form in the FY2009 Duncan Hunter National Defense Authorization Act. Under this act, a new commission was mandated to “conduct a comprehensive evaluation and assessment of policies that provide opportunities for the promotion and advancement of minority of the Armed Forces, including minority members who are senior leaders.”²⁹ After an 18 month study, this Military Leadership Diversity Commission (MLDC) identified several concerns (which will be discussed in greater detail below) and made recommendations that were presented to Congress in March 2011. This triggered another review of women in the service to determine if any revisions were needed to ensure women service members have an equitable opportunity to compete and excel in the Armed Forces. The “Women in the Service” review was submitted to Congress on February 9, 2012 and recommends that all military services align with DoD policy, effectively rescinding the Army’s collocation policy.³⁰

²⁸U.S. Library of Congress, CRS, *Women in the Armed Forces: Issues for Congress*, by David F. Burrelli, CRS Report R42075 (Washington, DC: Office of Congressional Information and Publishing, December 2012), Summary.

²⁹Lester L. Lyles, *From Representation to Inclusion: Diversity Leadership for the 21st-Century Military* (Arlington, VA: Military Leadership Diversity Commission, March 15, 2011), 141.

³⁰Department of the Army, AR 600-13, *Army Policy for the Assignment of Female Soldiers*. (Washington, DC: Government Printing Office, 27 March 1992), 1. The Army’s assignment policy for female Soldiers allows women to serve in any officer or enlisted specialty or position except in those specialties, positions, or units (battalion size or smaller) which are assigned a routine mission to engage in direct combat, or which collocate routinely with units assigned a direct combat mission; Also see, U.S.

In May 2012, the Army aligned their current definition of the direct ground combat rule to resemble the original rule as articulated by Secretary of Defense Aspin in 1994 as:

Engaging an enemy on the ground with individual or crew served weapons, while being exposed to hostile fire and to a high probability of direct physical contact with the hostile force's personnel. Direct ground combat takes place well forward on the battlefield while locating and closing with the enemy to defeat them by fire, maneuver, or shock effect.³¹

The Army's current definition clarifies that the closed positions are to remain at battalion size or smaller. The latest update to the policy regarding this expansion was released in January 2013, and highlighted that special operations aviation battalions will be opening applications for qualified female pilots, pending Congressional approval.³²

Women in Combat Arms Debate

As the section title suggests, there is a distinct difference in characterizing the debate surrounding women in the military. A brief look at the history of the U.S. Army will reveal that women have been contributed in every major conflict since the birth of the United States. As the nation has grown, so too has the role of women in defending it. When asking the question, “does the integration of women into male combat units make the military a better organization,” there are a wide variety of opinions on the subject that have come to define the debate – each of which can encompass stand-alone volumes of discussion. For the purpose of this research, six main areas will be addressed in an attempt to fairly and accurately depict the positions of critics and

Report to Congress on the review of laws, policies and regulations restricting the service of female members in the U.S. Armed Forces, (Washington, D.C.: Office of the Under Secretary of Defense Personnel and Readiness, February 2012).

³¹Les Aspin, U.S. Secretary of Defense. “Direct Ground Combat Definition and Assignment Rule.” Memorandum for Secretaries of the Military Departments. Washington, DC, January 13, 1994.

³²Joe Gould, “Army Oks Women as Spec Ops Aviators,” *Army Times*, January 11, 2013. <http://www.armytimes.com/news/2013/01/army-oks-women-specops-aviators-011113w/> (accessed February 17, 2013). Also see, “Army Special Ops Helicopters Opening for Women”, *Associated Press*, February 1, 2013. <http://www.courierpress.com/news/2013/feb/01/army-special-ops-helicopters-opening-for-women/> (accessed February 17, 2013).

proponents alike. To that end the areas of physical limitations, health issues, risk of kill or capture, force readiness and manning, psychological issues, and unit cohesion will be given a brief treatment to highlight the major points of discussion and the logic behind each. Under each section the viewpoint of critics will be presented first, followed by the counterarguments of proponents of expanding the integration of women in combat arms units.

Physical Limitations

Arguably, the most contested and central issue regarding the women in combat debate revolves around the ability for women to perform effectively in combat while carrying the heavy equipment loads that infantryman and special forces operators must often shoulder. While outside the specific focus of this research, no discussion on the topic of women in combat can be considered comprehensive without understanding this particular aspect of the debate.

Critic Argument

Science proves that women cannot perform at the same physical level as men, in general.

The 1992 commission on the assignment of women to the armed forces concluded that among basic entry recruits, women are on average, 9% shorter and 20% lighter than men, with 55% less upper body strength and 27% less aerobic capacity, which is essential for endurance.”³³ Many of the closed occupational specialties within the Army require the physical capacity to perform potentially lifesaving activities. Reacting rapidly to enemy contact while carrying 100+ pounds of equipment and gear, carrying injured teammates to safety over long distances, and the ability to navigate obstacles in various operational environments primarily using upper body strength - i.e. buildings, jungles, mountains, etc. - demonstrate a few examples of the physical demands that,

³³United States, *Hearings On National Defense Authorization Act for Fiscal Years 1992 and 1993*, C-3 – C-5.

statistically, the majority of females are unable to perform.

Social and political pressure has led to separate physical standards that artificially demonstrate equality. Since the shift to the All-Volunteer Force (AVF) in the early 1970s, attempts have been made to establish a single physical fitness standard for men and women that realistically reflect the demands of a combat environment.³⁴ However, the Women's Liberation Movement and their supporters politicized these attempts as an unfair practice used to limit the promotions of women in the military and demanded gender-norming of the standards. This is evinced by the policy choice of measuring male and female physical performance separately with the U.S. Army Physical Fitness Test (APFT). The result of this was the development of a separate scale based on age and gender. Rather than rely on the logic that "equal effort" equated to "equal results," physical training events that are more difficult for women become lower in order to make training more equitable. The facade of training results are described as "equal" between men and women, even though it is less demanding than what is required for the men. The U.S. Army has a bifurcated APFT scale, creating the illusion of equality that does not account for less pure physical capability exhibited from females. Without discrediting the few female trainees who are able to perform in physically demanding events at the same levels as average males, "...policies are adjusted based on the majority of average Soldiers and not the exceptional few."³⁵

Even when given the opportunity to complete the entry qualifications for elite schools that have traditionally been all male, women fail to achieve the standard. By and large, women have been precluded from participating in the direct ground combat activities in not just the U.S. Military, but in militaries around the world. However, some nations have conducted attempts to

³⁴Robert K. Griffith Jr. and Center of Military History, *The U.S. Army's Transition to the All-Volunteer Force, 1968-1974* (Washington, D.C.: U.S. Army Center of Military History, 2011), 188-93.

³⁵Ibid. (Women in Combat, Center for Military Readiness)

open combat arms to women. For example, Israeli, driven by constant existential threat from their neighbors, has made several attempts to more fully integrate females into their Infantry units. However, the reality is that their women remain quite far from much front line experience.³⁶ In 2001, New Zealand went so far as to open admissions for service in the Special Air Service, but no woman, to date, has meet the standard for entry.³⁷

Proponent Argument

Physically, some women can perform to the standard as men. Even critics highlighting the physical limitations between men and women concede that there is a population of female soldiers that can perform at the same physical level as their male counterparts.³⁸ Female firefighters serve as an example of women that routinely operate under dangerous conditions and are required to carry personnel out of harm's way - in addition to all of their firefighting equipment.³⁹ Furthermore, even the casual observer can observe the impressive feats of strength and physical endurance that are on display as women compete on an international level at the

³⁶Jodi Rudoren, "Looking to Israel for Clues On Women in Combat," *New York Times*, January 25, 2013. http://www.nytimes.com/2013/01/26/world/middleeast/looking-to-israel-for-clues-on-women-in-combat.html?_r=0 (accessed April 1, 2013).

³⁷Andrea Vance, "SAS Recruiters Have Women in Their Sights," *National News*, <http://www.stuff.co.nz/national/5418603/sas-recruiters-have-women-in-their-sights> (accessed April 1, 2013).

³⁸Figures range anywhere from 1% to 8% of the analyzed female population. Kingsley R. Browne, *The Report of the Military Leadership Diversity Commission: An Inadequate Basis for Lifting the Exclusion of Women from Direct Ground Combat* (Detroit, MI: Wayne State University Law School Legal Studies Series, April 2012), I; Joyce F. Benenson and Joy Schinazi, "Sex Differences in Reactions to Outperforming Same-Sex Friends," *British Journal of Developmental Psychology* 22, no. 3 (September 2004): 317-33; William J. Gregor, *Information Paper: Physical Suitability of Women for Assignment to Combat and Heavy Work Military Occupational Specialties* (Washington, D.C.: Center for Military Readiness, April 26, 2012).

³⁹Denise M. Hulett et al., *A National Report Card On Women in Firefighting* (New York, NY: Ford Foundation, April 2008), 6-7. A study conducted on 114 fire departments across 39 states concluded that women had a 68% pass rate on the standardized Candidate Physical Assessment Test (CPAT) used for entry into the fire academies based on a single gender-neutral standard. Also, firefighting equipment may weigh up to 75 lbs.

annual Crossfit Games.⁴⁰ And women are getting stronger and faster every generation. We have only to look at the records of the Olympic Games since the formal inclusion of females in to the Armed Forces in 1948 to today to see the significant gains in strength and speed, as noted in the table below, where in some instances women today have exceeded the capabilities of men in years past.

Table 1. Olympic Summer Games Records with Gender Breakout

OLYMPIC SUMMER GAMES RECORDS			
EVENT	WOMEN	MEN	WOMEN
	1948	1948	2012
100M dash	11.9 sec	10.3 sec	10.92 sec
High Jump	1.68 meters	1.98 meters	2.01 meters
Long Jump	5.695 meters	7.825 meters	7.15 meters
Shot Put	13.75 meters	17.12 meters	19.16 meters
Discus Throw	41.92 meters	52.78 meters	65.18 meters
Javelin Throw	45.57 meters	67.56 meters	61.51 meters

Source: Selected data was obtained from Databaseolympicss.com.

So while no one will refute that men today are stronger than women today, the core argument is that the physical requirements necessary to perform effectively in combat is resident with a continually growing population of women.

The 100 pounds capability is a standard that even Infantrymen cannot maintain and adequately perform their duties. A 2001 board study concluded that U.S. Army soldiers faced a "severe restriction" in mobility due to the weight of their gear. The general recommendation was that the combat load should be reduced to a total load of no more than 50 pounds.⁴¹ The

⁴⁰“Women,” Crossfit Games, <http://games.crossfit.com/games/women> (accessed March 12, 2013).

⁴¹Hal Bernton, “Weight of War: Military Struggles to Lighten Soldiers' Load,” *Seattle Times*, February 13, 2011. http://seattletimes.com/html/localnews/2014217586_weightofwar14.html (accessed March 4, 2013).

Asymmetric War Group (AWG) was spearheading an initiative designed to significantly lighten the load of Infantryman. In conjunction with efforts by Program Executive Office (PEO) Soldier, armor and equipment weights were designed to be 24 pounds lighter with research dollars being put into the development of a robotic mule.⁴² “The Army Science Board warned of a big weight problem for infantry troops.” And since 2009, the Army has distributed more than 48,000 of the lighter-weight armor to front-line Soldiers in Afghanistan.⁴³

Throughout history there are successful examples of women performing in direct combat within combat arms jobs, during both major combat and stability type operations, despite social, cultural, and political barriers to participation. From women in the Russian Red Army, to the women guerilla squads in Sarajevo, to the exploits of U.S. military police soldiers, there are many examples of women effectively performing the duties of infantry units. Women within the Red Army resiliently and successfully executed their jobs within combat arms positions, in one of the bloodiest theaters in recorded history.⁴⁴ Over 550,000 Russian women were conscripted into the war effort during WWII, serving in direct combat roles, such as anti-aircraft machine gunners, rifleman, and snipers.⁴⁵ More than 150,000 women were awarded for their bravery in the struggle, with more than two hundred receiving the Order of Glory 2nd and 3rd degree, 86 women received the rank of Hero of the Soviet Union (to include 29 pilots) and four

⁴²U.S. Army Program Executive Office, “Mission,” PEO Soldier, <https://peoSoldier.army.mil/> (accessed March 12, 2013). PEO Soldier is the Army’s organization with the task to develop, acquire, field and sustain affordable integrated state of the art equipment to improve Soldier dominance in Army operations today and in the future. U.S. Army Program Executive Office, “Mission,” PEO Soldier, <https://peoSoldier.army.mil/> (accessed March 12, 2013).

⁴³Bernton, “Weight of War: Military Struggles to Lighten Soldiers' Load,” February 13, 2011.

⁴⁴Antony Beevor, *Stalingrad: the Fateful Siege: 1942-1943* (New York: Penguin Books, 1999), 108.

⁴⁵David M. Glantz, *Colossus Reborn: the Red Army at War: 1941-1943* (Lawrence, KS: University of Kansas Press, 2005), 551-552.

women became full cavaliers in the Order of Glory.⁴⁶

In Eastern Europe, during the longest siege in modern history, a 60-woman infantry unit from Pofalici, a northern Sarajevo neighborhood, took part in some of the heaviest house-to-house fighting during the conflict. Their success at thwarting the Bosnian Serbs operational control of the battlefield served as an archetypal example of their determination, grit, and effectiveness.⁴⁷

Captain Linda Bray, a U.S. Army Military Police (MP) officer, led Soldiers into ground combat, successfully taking a well-defended Panamanian police post during the invasion of Panama.⁴⁸ She was the first female officer recorded to have officially done so in the U.S. Army. The combat nature of her mission, however, was marginalized by senior Pentagon officials, which stated that the Department of Defense would continue to uphold combat exclusions for women (despite empirical examples of their success).⁴⁹ Even in today's military police force, women perform similar missions to Infantrymen, especially within the context of stability and counterinsurgency (COIN) operations. Within these operations, women are armed and equipped with the same poundage of personal protective equipment as their male counterparts.⁵⁰

⁴⁶Ibid., 721. The Hero of the Soviet Union is the highest honorary title that may be granted to a soldier or civilian for a heroic act. The Order of Glory is the highest military award granted by the Russian Federation.

⁴⁷Associated Press "Bosnian Women's Infantry Squad of 60 Have Banded Together to Hold Hill," *Southeast Missourian (Cape Girardeau, MO)*, October 30, 1992. <http://news.google.com/newspapers?nid=1893&dat=19921030&id=QMkfAAAAIBAJ&sjid=INgEAAAAIBAJ&pg=2278,7941000> (accessed March 13, 2013).

⁴⁸Cynthia Enloe, *The Morning After: Sexual Politics at the End of the Cold War* (Berkley, CA: University of California Press, 1993), 218.

⁴⁹Ibid., 219. Also see, "Profiles of Women in the U.S. Army," Army.mil Features, <http://www.army.mil/women/profiles.html> (accessed February 14, 2013).

⁵⁰Kim Fields and John Nagl, "Combat Roles for Women: A Modest Proposal," *PARAMETERS* (Summer 2001): <http://www.carlisle.army.mil/USAWC/Parameters/Articles/01summer/Field.htm> (accessed March 19, 2013).

Critic Argument

Women are more prone to injury than men, when operating at a high level of physical performance. As women try to increase physical training to overcome the physical limits and achieve the performance of their male counterparts, the number of injuries that they suffer is highly disproportionate. Because of this, training standards to reflect these differences are grossly insufficient to meet any viable standard of physical performance. These health issues can be attributed to physiological explanations related to bone density, and joint laxity.

The female skeletal system is less dense and therefore more prone to fractures than males. In fact, a 2004 study conducted by the Center for Military Readiness on basic trainees concluded that the rate of injuries for female stress fractures were double that of male trainees.⁵¹ Additionally, studies show that female athletes have increased general joint laxity throughout the elbow, knee, and ankle joints than their male counterparts. This joint laxity and hyperextension potential significantly increase the risk of ACL injury in female subjects.⁵² Knee injuries, particularly, Patellofemoral pain syndrome (PFPS) has a much greater incidence of the in women - 20%, compared with only 7.4% in men.⁵³

Feminine hygiene is a huge disruption for units operating in austere environments. Female hygiene in austere locations is a requirement that can potentially have larger operational impacts. This reasoning is the central argument for some countries' continued exclusion of women in the submarine services, due to the mixed-gender accommodations in small, austere

⁵¹Ibid. PFPS is a medical term used to describe painful but stable patella.

⁵²Alan Ivković Miljenko Franić, Ivan Bojanić, and Marko Pećina, "Overuse Injuries in Female Athletes," *Croatian Medical Journal* 48, no. 6 (December 2007): 767-78, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2213798/> (accessed March 8, 2013).

⁵³PFPS is a term used to describe painful but stable patella. Ibid.

locations/spaces. Urinary tract infections (UTI), vaginitis, and menstrual symptoms are the most common gynecologic health problems for the women serving in field environments.⁵⁴ One research study shows that 48% of a group of 850 women in a deployed environment were significantly affected by these medical issues and nearly 30% were unable to report for duty.⁵⁵ These same biological concerns also extend into the austere work environments typically associated with direct ground combat units, perpetuating concerns for the health and wellbeing of females operating in those situations for durations longer than 60 days.

Proponent Argument

Some high performance female athletes are more prone to injury, but the reason is not strictly physiological. There is an overrepresentation of stress fractures within female athletes when compared to their incidence within the general population, based on what the American College of Sports Medicine calls the “female athlete triad” – which actively contributes to weakening bone density and is rooted in eating disorders.⁵⁶ In those sports which have weight classes or are subjectively judging the performance of women, such as gymnastics or dance, there is up to a 65% incidence of women with eating disorders. But when looking at the general population, women are less likely to participate in sports and recreational activities that may result in serious injury – a fact which contributes significantly to force readiness discussions

⁵⁴COL Ann Naclerio MD et al., *The Concerns of Women Currently Serving in the Afghanistan Theater of Operations: White Paper* (Kabul Afghanistan: Health Service Support Assessment Team, ISAF Joint Command (IJC), Afghanistan, October 10, 2011), 8.

⁵⁵Naclerio, *The Concerns of Women Currently Serving in the Afghanistan Theater of Operations: White Paper*, 8.

⁵⁶Katherine K. Yeager Rosemary Agostini, Aurelia Nattiv, Barbara Drinkwater, “The Female Athlete Triad: Disordered Eating, Amenorrhea, Osteoporosis,” *Medicine and Science in Sports and Exercise* 25, no. 7 (December 2007): 775-77, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2213798/> (accessed March 19, 2013).

below.⁵⁷

Women's health issues in austere environments can significantly be mitigated by addressing the lack of education and training across the force. Recent studies show that the majority of issues with women's health issues in a deployed environment have more to do with lack of education regarding preventive care and ignorance of resources available in theater to address their health related issues.⁵⁸ Additionally, poor sanitation conditions, lack of latrines, lack of privacy, and the inconvenience of undressing in full battle gear tend to be the enablers for many of health concerns of women. The risk is compounded by women intentionally drinking less fluid to avoid the need to urinate and postponing/delaying urination.⁵⁹ In today's combat theaters, there is an appropriate level of organically assigned medical care to attend to specific female needs. Therefore, a focus on educating the force early and often throughout the soldier's military career enables individual level solutions to decrease the risks of menstrual disorders and urogenital infections, and ultimately enhance mission readiness.⁶⁰

Risk of Kill or Capture

Critic Argument

"Military women are 90% less likely than men to be killed in combat... [therefore] uniformed women are not pulling their weight."⁶¹ While not trying to minimize the contributions of female soldiers efforts in the Global War on Terror, "it is preposterous to argue

⁵⁷Ibid.

⁵⁸Naclerio, *The Concerns of Women Currently Serving in the Afghanistan Theater of Operations: White Paper*, 8.

⁶⁰Ibid.

⁶¹Martin Van Creveld, "To Wreck a Military," *Small Wars Journal* (January 28, 2013): <http://smallwarsjournal.com/jrnl/iss/201301> (accessed February 11, 2013).

that men and women were equally involved in battle and faced equal risks.”⁶² A quick look at the statistics of the number of wounded in action (WIA) and killed in action (KIA) indicates that of the 220,000 women that have served in OIF and OEF, approximately 11% were women. However, less than 2% were either WIA or KIA.⁶³ Therefore, equal participation is not translating into equal risk.

The risk of capture is inherently abhorrent to men, and socially unacceptable on a national scale. The risk of capture and torture to the nation’s daughters places a psychological anchor for men in combat filling a protectorate role.⁶⁴ A presidential commission report found that male prisoners of war (POW) were never subject to the sexual abuses that women POWs were, which may be a failure to report statistics. In 1991, however, Rhonda Cornum, at the time a U.S. Army Major and flight surgeon, was one of two female POWs captured in Iraq but failed to report molestation details due to low personal prioritization with regards to the larger situation at the time.⁶⁵ Failure to report is a typical side-effect associated with the psychological trepidation of being caught and possible perception of failure. Therefore, the details while in captivity sometimes seem trivial in comparison. Also, the larger aspect of sacrificing the nation’s daughters to the horrors of combat becomes a reality, further perpetuating psychological apprehensions associated with placing women in direct combat roles.

⁶²Kingsley R. Browne, *The Report of the Military Leadership Diversity Commission: An Inadequate Basis for Lifting the Exclusion of Women from Direct Ground Combat* (Detroit, MI: Wayne State University Law School Legal Studies Series, April 2012), 14

⁶³Ibid. Also see, Lizette Alvarez, “Women at Combat Army - G.I. Jane Breaks the Combat Barrier: Women in Combat Arms,” *NY Times*, August 15, 2009.
<http://www.nytimes.com/2009/08/16/us/16women.html?pagewanted=all> (accessed March 7, 2013).

⁶⁴Dave Grossman, *On Killing: the Psychological Cost of Learning to Kill in War and Society*, rev. ed. (New York: Back Bay Books, 2009), 175.

⁶⁵Nicholas D. Kristof, “A Woman’s Place,” *New York Times*, April 25, 2003.
<http://www.nytimes.com/2003/04/25/opinion/25KRIS.html> (accessed March 22, 2013).

Proponent Argument

Because women are legally restricted from many front line jobs, they will not have the same risk to be shot at. Using casualty rates as a measure of effectiveness is a poor metric with gaping logic holes.⁶⁶ By the same logic, Army officers are not pulling their weight because they comprise 18% of the force, according to Army G-1 FY11 data, and yet only comprise 10% of KIA and 6.6% of WIA, as indicated in the chart below. Women are still put to the same risk as their male counterparts during indirect fire attacks on their forward operating bases, and furthermore nearly 61% of all soldier casualties within both Iraq and Afghanistan have been caused by improved explosive devices (IED) and roadside bombs detonating on unsuspecting convoys traveling - not from direct fire engagements between groups of armed militants.⁶⁷

⁶⁶A *measure of effectiveness* is defined as a criterion used to assess changes in system behavior, capability, or operational environment that is tied to measuring the attainment of an endstate, achievement of an objective, or creation of an effect. Department of Defense, JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*. (Washington, DC: Government Printing Office, 15 July 2012), 199.

⁶⁷ IEDs continue to be the greatest threat to coalition forces within Iraq and Afghanistan and they have become the weapon of choice for global insurgents and terrorists with an average of more than 260 IED incidents per month outside of Afghanistan and Iraq. LTG Michael L. Oates, *Joint Improved Explosive Device Defeat Organization (JIEDDO) FY 2010 Report* (Washington, D.C.: Joint IED Defeat Organization (JIEDDO), 2010), 4. Also see, Tom Vanden Brook "IED Casualties Dropped 50% in Afghanistan in 2012," *USA Today*, January 18, 2013. <http://www.usatoday.com/story/news/world/2013/01/18/ied-casualties-down-afghanistan-2012/1839609/> (accessed March 19, 2013).

Table 2. KIA and WIA for OIF and OEF 2001- Present

		FEMALE	MALE	TOTAL
KILLED IN ACTION 2001 - 2013	ARMY ACTIVE DUTY	49	2,975	3,024
	ARMY NATIONAL GUARD	12	508	520
	ARMY RESERVE	8	202	210
	ARMY TOTAL	69	3,685	3,754
	ARMY ENLISTED	60	3,319	3,379
	ARMY OFFICER	9	366	375
	DoD TOTAL	84	5,114	5,198

		FEMALE	MALE	TOTAL
WOUNDED IN ACTION 2001 - 2013	ARMY ACTIVE DUTY	554	26,622	27,176
	ARMY NATIONAL GUARD	134	5,539	5,673
	ARMY RESERVE	125	2,003	2,128
	ARMY TOTAL	813	34,164	34,977
	ARMY ENLISTED	752	31,904	32,656
	ARMY OFFICER	61	2,260	2,321
	DoD TOTAL	945	49,106	50,051

Source: DMDC, CTS Casualty File as of March 2013

The U.S. Military and society, in general, has accepted that women are fulfilling combat roles and are exposed to risk of capture or death. As was highlighted earlier in the policy discussion, since the formal inclusion of women into the All-Volunteer Force, the issue of exposure to combat has been a topic that has largely shaped the conversation of the role of women in the military. As early as 1981, senior Pentagon officials in charge of personnel activities were stating that the Army had “accepted the fundamental premise that women will be killed and wounded and captured in the event of the next war.”⁶⁸ This sentiment was echoed by the media in the immediate aftermath of the Persian Gulf War, as indicated in a report by the Los Angeles Times which stated:

⁶⁸The statement was made by Assistant Secretary for Manpower and Reserve Affairs, William Clark, and the Deputy Chief of Staff for Personnel, LTG. Robert Yerks. Anita K. Blair, *Congressional Commission On Military Training and Gender- Related Issues: Final Report: Findings and Recommendations* (Arlington, VA: Commission on Military Training and Gender-Related Issues, July 1999), 439.

During the Gulf War, the American public seemed to accept the inevitability that some U.S. servicewomen would be killed or captured. The absence of a severe public backlash against the deployment of women in Operation Desert Storm has become an important factor in a move to repeal laws excluding women from combat.⁶⁹

Proponents maintain that contrary perspectives are an antiquated position not in touch with the current beliefs of the nation.

Force Readiness and Manning

Critic Argument

Women have historically lower retention rates than men. As was indicated in the review completed by the Military Leadership and Diversity Commission in 2011, across all the branches of military service, and among both officers and enlisted soldiers, there is a distinct gender gap in retention rates within the Armed Forces.⁷⁰ This gap is ascribed to a societal expectation that women will stop their career, or put it on hold, to start a family and provide childcare. Additionally, research shows that this disparity between male and female retention rates can be attributed to the general attitude that many women currently serving do not anticipate staying in the military until retirement.⁷¹

⁶⁹Melissa Healy, "Pentagon Details Abuse of American POWs in Iraq Broken Bones, Torture, Sexual Threats Are Reported. It Could Spur Further Calls for War Crimes Trial: Gulf War," *L.A. Times*, August 2, 1991. http://articles.latimes.com/1991-08-02/news/mn-223_1_war-crimes-trials (accessed March 19, 2013).

⁷⁰Lester L. Lyles, *Military Leadership Diversity Commission Decision Paper #3: Retention* (Arlington, VA: Military Leadership Diversity Commission (MLDC), February 2011), 29-31, <http://diversity.defense.gov/Resources/Commission/docs/Decision%20Papers/Paper%203%20-%20Retention.pdf> (accessed March 19, 2013).

⁷¹*Ibid.*, 39.

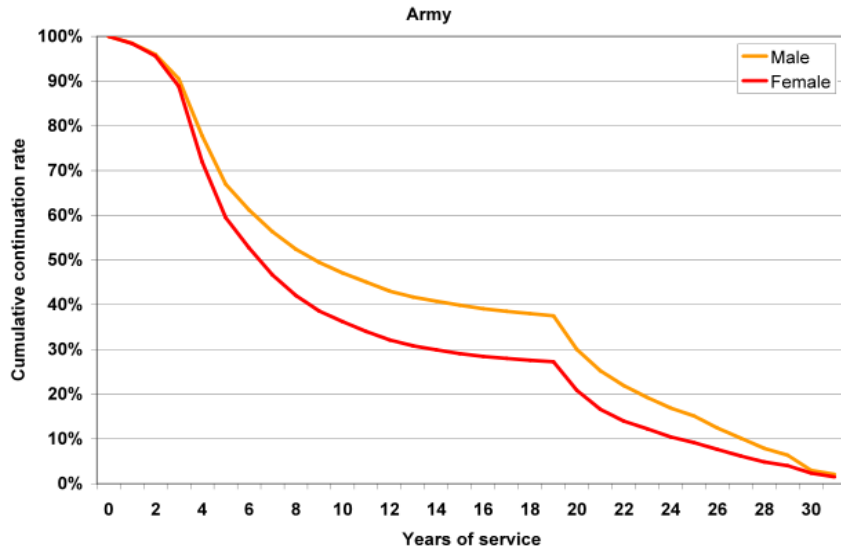


Figure 1. Officer Retention Rates 2000 – 2008

Source: Military Leadership Diversity Commission (MLDC).⁷²

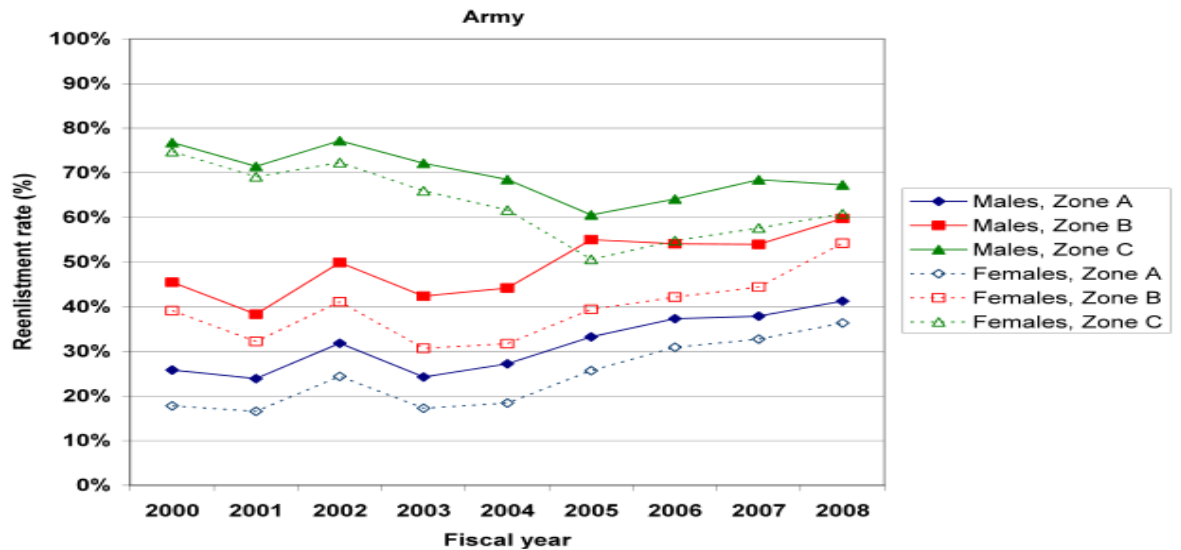


Figure 2. Enlistment Retention Rates, 2001 - 2008.

Source: Military Leadership Diversity Commission (MLDC).

Pregnancy is a serious concern that has significant effects on force readiness,

⁷²For the enlisted soldier data, Zones A, B, and C correspond to the time periods from 17 month to 6 year, 6 years to 10 years, and 10 years to 14 years, respectively.

especially in a deployed environment. At any point in time, a tenth of women in the military are pregnant.⁷³ This is further compounded by the perceptions that some female soldiers become pregnant to avoid deployments and, in general, pregnant soldiers are a long-term burden.⁷⁴ Approximately 15% of female soldiers are single mothers – with a representation of 23% among the female warrant officer community. This has implications on U.S. Army family care plans and, ultimately, deployability, especially among the aviation community of which 16% are female warrant officers.⁷⁵

But beyond deployment considerations, time off associated with pregnancy has operational effects on those occupational specialties that are currently closed to women. For example within the 160th Special Operations Aviation Regiment (SOAR), it requires many years to develop the appropriate level of skill and experience just to qualify to access to that organization. Once successfully accessed into the organization, it takes an additional two years of training, field exercises, and deployments to achieve fully mission qualified (FMQ) status. If an aviator were to become pregnant, or take the allotted 18 months for maternity leave, a gap in manpower would significantly impact an aviation unit given the high operational tempo of special operations aviation. With the existing budget constraints on the U.S. Army, this could degrade the capability and capacity of the Aviation Branch and military force as a whole, given the time and cost to train another pilot (male or female) to fill the gap.⁷⁶

⁷³Browne, *An Inadequate Basis for Lifting the Exclusion of Women from Direct Ground Combat*, 24.

⁷⁴*Ibid.*, 7, 24.

⁷⁵Headquarters, Department of the Army, *FY11 Army Profile*, by Dr. Betty D. Maxfield (Washington, D.C.: Deputy Chief of Staff of Personnel, G-1, Office of Army Demographics, September 2011), http://www.armyg1.army.mil/hr/docs/demographics/FY11_ARMY_PROFILE.pdf (accessed February 11, 2013).

⁷⁶See Appendix B.

Proponent Argument

Women's low retention rates are overrepresented as an issue of work/family conflict.

The issue of lower retention rates for women is a symptom of a larger issue of an organizational culture that has only incrementally evolved its' attitudes regarding women's service, while the landscape of military forces in the post-Cold War has shifted fundamentally.⁷⁷ When looking at the data regarding retention, the top responses of female officers for leaving the military were, in order of importance: 1) low job satisfaction, 2) not getting desirable or appropriate assignments, 3) too many deployments, 4) not assigned to jobs offering technical/professional development, and 5) desire to settle in a particular location.⁷⁸ None of these issues explicitly states the conflicts between work and desire to get out and start a family, though it may be inferred in the third and the fifth responses. These responses reflect the reality that work/family conflict is a secondary issue to the perception of inequality that women feel regarding their opportunities for advancement within the Armed Forces. This perception is reinforced, as the earlier literature highlighted that 80% of today's general officers come from occupational specialties that are closed to women.

Pregnancy statistics are both exaggerated and are more negatively considered than other medical conditions that result in redeployment. When looking at the U.S. Army, an article released by the Armed Forces Health Surveillance Center indicates that from 2001 to 2010 there have been approximately 52,000 births averaging out to approximately 5,200 births per year for the U.S. Army.⁷⁹ During that time period, the Army maintained an average of 72,500 female soldiers which translates to approximately 7% of the women being pregnant at any point and

⁷⁷Fields and Nagl, "Combat Roles for Women: A Modest Proposal," 2001.

⁷⁸Lyles, *Military Leadership Diversity Commission Decision Paper #3: Retention*, 43.

⁷⁹See Appendix A

time. This translates to approximately 1% of the total force. During deployments, this number becomes smaller as several factors mitigate the chance of pregnancy: women who are married and not deployed with their spouse, women that are physically unable to become pregnant, women that appropriately use one or more types of contraception, women that are homosexual, and women practicing abstinence for religious or moral reasons.⁸⁰ In addition other conditions such as injuries from sports and weight lifting, can result in a similar loss of manpower from theater, and are much more prevalent among males than female soldiers.

Psychological

Critic Argument

Women are not psychologically and emotionally equipped to deal with combat in a unit that is predominately all male - and potentially hostile. Psychological challenges women face in the military are physiologically more impactful than the ones most men face. Even though women deal with the same combat stress issues that men do and have shown similar coping mechanism, “military women face [additional challenges that] can involve leadership acceptance, child care, biological differences, societal role expectations, sexual harassment and assault, and ostracism by peers because of gender differences.”⁸¹ For women, psychological challenges are typically externally induced, and as a result, they experience higher rates of sexual harassment and assault,

⁸⁰A study conducted at Madigan Army Medical Center, Fort Lewis shows that among single service members, research indicates that 55% of pregnancies were unintended. J.B. Clark, V.L. Holt, and F. Miser, “Unintended Pregnancy Among Female Soldiers Presenting for Prenatal Care at Madigan Army Medical Center,” National Center for Biotechnology, [http://www.armyg1.army.mil/hr/wita/docs/A%20Guide%20to%20Female%20Soldier %20Readiness.pdf](http://www.armyg1.army.mil/hr/wita/docs/A%20Guide%20to%20Female%20Soldier%20Readiness.pdf) (accessed March 10, 2013).

⁸¹Dr. Kate McGraw, “Psychological Health Challenges for Women Warriors,” DCoE Psychological Health, <http://www.dcoe.health.mil/blog/article.aspx?id=1&postid=274> (accessed March 12, 2013).

which may justify the high depression rates for women in the military.⁸² Other sources also indicate the propensity for women to suffer more psychological issues than their male counterparts. In the civilian sector, women are twice as likely as their male counterparts to suffer from post-traumatic stress disorder (PTSD), according to a review of 25 years of research on gender differences in trauma and PTSD.⁸³ Also, a recent study done on female Airmen demonstrates that women who have high levels of work-family conflict also report more symptoms of PTSD and depression.⁸⁴ This data lends credence to the linkage of lower retention rates due to conflicts of family and military careers. But the psychological impacts are not limited to female soldier issues. Male soldiers have also voiced their opinions on gender integration citing areas such as: increased sexual tension and harassment, frustration with female emotionality, and having to exercise discretion or decorum to avoid offending females, which can lead a hostile environment within the unit.⁸⁵

Proponent Argument

Women that choose to be in the military are generally more resilient – and those that seek to enter into direct combat ground units, are even more so. The Army Surgeon General’s chief psychiatrist consultant, Colonel Elspeth Ritchie, stated, “women in a volunteer military are self-selected. They join knowing they will be exposed to hardships and combat. So they are a resilient,

⁸²Ibid.

⁸³David F. Tolin and Edna B. Foa, “Sex Differences in Trauma and Posttraumatic Stress Disorder: A Quantitative Review of 25 Years of Research,” *Psychological Bulletin* 132, no. 6 (November 2006): 959-92.

⁸⁴Penny F. Pierce, Lisa Lewandowski-Romps, and Perry Silverschanz, “War-Related Stressors as Predictors of Post-Deployment Health of Air Force Women,” *Women's Health Issues* 21, no. 4 (July 2011): 152.

⁸⁵Kingsley R. Browne, *The Report of the Military Leadership Diversity Commission: An Inadequate Basis for Lifting the Exclusion of Women from Direct Ground Combat* (Detroit, MI: Wayne State University Law School Legal Studies Series, April 2012), ii.

hardy group of people, perhaps more so than on the civilian side.”⁸⁶ A personality study conducted on Air Force sensor operators (for unmanned aerial vehicles) indicates that female operators possess the, “extroverted, assertive, highly competitive, achievement oriented, and tough characteristics...[similar to their male counterparts].”⁸⁷ When discussing the mental health of the Armed Forces, each year approximately 6% of service members have at least one health care encounter associated with a diagnosis of a mental disorder.⁸⁸ What is essential to highlight is that of the 1.4 million active component soldiers serving today, mental disorders are the leading cause of hospitalizations among men and *second* leading cause among women. This suggests that women have, at a minimum the same coping skills as their male counterparts, but could quite possibly be more resilient.⁸⁹

Unit Cohesion

Critic Argument

Fraternal, non-sexual bonding among male military unit members is the essential ingredient to unit cohesion, and the introduction of women would disrupt that significantly. There are many concerns about the potentially negative consequences of increased sexual relationships inherent in

⁸⁶Kristin Henderson, “Ready to Kill,” *Washington Post*, February 4, 2008.
http://articles.washingtonpost.com/2008-02-24/news/36799791_1_cobra-helicopter-air-show/7 (accessed March 21, 2013).

⁸⁷LTC Robert Craig-Gray, John Heaton, and Amber Salinas, *NEO PI - R Normative Personality Data That Distinguish U.S. Air Force MQ - 1 Predator and MQ - 9 Reaper Sensor Operators from Ac - 130 Gunship Sensor Operators and Peers in the General Population* (Wright -Patterson AFB, OH: Air Force Research Laboratory 711th Human Performance Wing School of Aerospace Medicine Aerospace Medicine Education, June 2011), 20, <http://www.dtic.mil/dtic/tr/fulltext/u2/a548330.pdf> (accessed March 7, 2013).

⁸⁸U.S. Armed Forces Health Surveillance Center, “Supplemental report: Selected mental health disorders among active component members, U.S. Armed Forces, 2007-2010,” in “Mental Health Issue,” Special issue, *Medical Surveillance Monthly Report* 17, no. 11 (November 2010), 2, http://www.afhsc.army.mil/viewMSMR?file=2010/v17_n11.pdf (accessed March 6, 2013).

⁸⁹*Ibid.*

the addition of women being introduced into all male combat units. The rationale was that intra-unit sexual activity would lead to dysfunctional and potentially damaging relationships, which would erode esprit-de-corps.⁹⁰ The threat to men's fraternal bonding was also a concern that accompanied the introduction of women into combat units. Inclusion into elite all male units, such as the Rangers, would be tantamount to, "changing the fabric of the military culture to improve the odds of individual achievement."⁹¹ Within the closed occupational specialties, a bond that is centered on hypermasculinity – a trait that is desirable in a lethal fighting force – lies at the core of all male unit cohesion. This same hypermasculinity will often result in a negative outcome when women are introduced into the unit. Research has shown that in a peacetime environment, rape rates in the military are below the civilian rates – but in times of war, these rates climb to several times the civilian rate.⁹² Even when not expressed in the extreme outcomes of rape and sexual harassment, task cohesion of the unit is threatened with the integration of women into all male units, thereby disrupting the combat effectiveness of these organizations.⁹³

Proponent Argument

⁹⁰M. Rzechowka, "Gender Integration and Modern Military Forces: A Comparative Analysis," *The Canadian Army Journal* 13, no. 2 (January 20, 2010), 75.
http://www.army.forces.gc.ca/caj/documents/vol_13/iss_2/CAJ_vol13.2_10_e.pdf (accessed February 18, 2013).

⁹¹Stephen Kilcullen, "Women Don't Belong in Ranger School," *Wall Street Journal*, June 12, 2012. <http://online.wsj.com/article/SB10001424052702303830204577448821376681662.html> (accessed March 21, 2013).

⁹²Madeline Morris, "By Force of Arms: Rape, War, and Military Culture," *Duke Law Journal* 45, no. 4 (February 1996): 653,
http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1059&context=faculty_scholarship (accessed March 21, 2013).

⁹³A 1997 RAND study delineates social cohesion from task cohesion. *Social cohesion* refers to the nature and quality of the emotional bonds of friendship, liking, caring, and closeness among group members. *Task cohesion* refers to the shared commitment among members to achieving a goal that requires the collective efforts of the group. Margaret C. Harrell and Laura L. Miller, *New Opportunities for Military Women: Effects Upon Readiness, Cohesion, and Morale* (Santa Monica, CA: Rand Publishing, 2000), 54.

Women are already serving alongside men in a military that has successfully executed two extensive and complex conflicts in the Middle East. The key point of clarification is that women are already serving, not only in combat, but in the closed specialty branches as well. The Army rule dictates that women will not be assigned at the battalion level and below, but this does not prevent them from being assigned to the brigade headquarters and deploying as an enabler, as they do in the special forces community.⁹⁴ Therefore, the argument that integrating women into these occupational specialties will cause some sort of immediate spike in sexual harassment, assaults, and pregnancies is not realistic because women are already integrated into these units in a deployed environment – and anecdotal evidence would seem to support this logic.⁹⁵ Additionally, research conducted on the status of gender integration – specifically looking at its impact on morale, cohesion and readiness in 2000 has corroborated the anecdotal evidence. What that research demonstrated, and subsequent studies as well, is that there were negligible effects on these areas across the military services – with the caveat that the progress of integrating women into recently opened occupations was slow.⁹⁶

Demographic Snapshot of Women in Aviation

Population Data

Within the branch of U.S. Army Aviation, women are less represented than within the Army in general, with a population of roughly 10% of all aviators versus 14% of women in the total Active Army force.⁹⁷ That figure has grown from 8% in 2001 at a similar rate as females

⁹⁴Appendices B and C

⁹⁵Ibid.

⁹⁶Margaret C. Harrell, ed., *The Status of Gender Integration in the Military: Analysis of Selected Occupations* (Santa Monica, CA: Rand Publishing, 2002), xiii.

⁹⁷Appendix E and FY11 Army G-1 demographic report. The distinction is made among commissioned officers between branch officers (2nd Lieutenant thru General) and warrant officers (Warrant

across the force have grown, from roughly 12% of the total Active Army component. Warrant officers and branch officers comprise all the aviators within the branch, which totaled 8,008 in 2012. Within each group, females have a much lower representation than among the Army, writ large, comprising only 2.6% of all warrant officers, and 8.8% of all branch officers versus 14% of the active component of that same year.⁹⁸ As we focus more specifically on attack aviation, women make up 3.8% of all AH-64D pilots.⁹⁹ Since the attacks on 9/11, women have, on average, comprised 4.4% of all pilots (regardless of airframe), 7.1% of all branch officer attack pilots, and 2.6% of all warrant officer attack pilots.

One demographic statistic that is useful to consider in a discussion of aviator performance and proficiency is the number of qualified female instructor pilots (IP) among the force. Instructor pilots, and standardization pilots (SP), serve as the technical and tactical experts with the direct responsibility of training the force and enforcing the performance standards throughout the Aviation community.¹⁰⁰ By doctrine, the IP provides quality control for the aircrew training program (ATP) through the commander's standardization program and assists with development and execution of company gunnery tables and training exercises.¹⁰¹ As the data indicates in Appendix G, across all airframes there has been a steady increase in the percentage of females that are IPs since 2001. However, the actual percentages are only 9.3% among all

Officer 1 thru Chief Warrant Officer 5).

⁹⁸Extrapolated from data in Appendix E.

⁹⁹Ibid.

¹⁰⁰The SP is a primary advisor to the commander and develops, integrates, implements, monitors, and manages the aircrew training and standardization programs. The SP is also a principal trainer and peer leader for subordinate unit IPs with one SP and two IPs assigned per line company. While there is a small percentage of branch officers that attend the instructor pilot course (IPC), IPs are, by doctrine, warrant officer positions - so the populations of branch officer IPs are not considered here .U.S. Army, FM 3-04.126, 2-11.

¹⁰¹Ibid.

airframes, and a fractional .66% when looking at attack pilots.¹⁰² There is a certain degree of self-selection in the process, as IPs are one of four career tracks that warrant officers choose; maintenance test pilot (MTP), aviation safety officer (ASO), and tactical operations officer (TACOPS) are the other possibilities. Additionally, the statistics do not indicate the number of female pilots that assess for instructor pilot and do not complete the course. However, in practice, candidates are not sent to the instructor pilot course (IPC) without being vetted by their battalion and brigade SPs as viable candidates, which would lend itself to the more likely proposition that female pilots do not generally pursue the IP track.

Female Aviators in Command

An important area to explore is the gender breakout for field grade level commands. With respect to the force manning discussion and the debate about the advancement referenced earlier in the literature review, Army Aviation is singular as a combat arm branch that has the combat experienced female soldiers serving in direct combat positions without restriction. In a communication with Human Resource Command (HRC) Aviation Branch, a data pull from the U.S. Army's Total Officer Personnel Management Information System (TOPMIS) indicates that for the last 5 years the selection rate for females to operational battalion commands has been 7% of the total population.¹⁰³ However, those operational battalion commands have been for general support aviation battalions (GSAB), aviation support battalions (ASB), and the fixed wing aerial exploitation battalions (AEB).¹⁰⁴ The only female selected as an Assault Helicopter Battalion

¹⁰²Appendix G.

¹⁰³Email correspondence with author from HRC Aviation office, March 22, 2013.

¹⁰⁴There are six different operational battalion commands that are categorized based on the type of different airframes within their organization.. Department of the Army, FM 3-04.111, *Aviation Brigades*, Washington, DC: Government Printing Office, December 7, 2007, 1-4; The GSAB and assault helicopter battalion (AHB) are comprised of lift aircraft, which have a higher representation of female pilots (roughly 5% for UH-60 and CH-47 pilots). The ASB is the maintenance battalion, which is a track that has seen a

(AHB) commander was also the first female aviation Deputy Commanding General of a division, Brigadier General Laura Richardson.¹⁰⁵ Another significant first will occur this summer as the first female attack pilot, LTC Tammy Baugh, will be taking command on an ARB in the summer of 2013, in Colorado. However, to date, there have been no female armed reconnaissance squadron (ARS) commanders. At the brigade level, there has never been a female operational brigade commander assigned to an active duty combat aviation brigade (CAB).¹⁰⁶ The last key piece of data to note is that the projected promotion rates for women are anticipated to jump to 14% in FY2014 for battalion level commands. This is consistent with the general findings of the MLDC that women, who have not had the opportunity to command operational battalions in combat, are not being promoted to brigade command.¹⁰⁷

METHODOLOGY

A focused study will be utilized to determine the impact that females have had in direct combat as crewmembers in attack aviation units. In order to more fully address the arguments

higher percentage of females, though it is open to pilots from all airframes. Email from DMDC to the author, dated March 5, 2013; The ARB and the attack reconnaissance squadron (ARS) are the true “direct combat” formations comprised of AH-64 and OH-58 aircraft, respectively, with similar mission sets which are outlined at the beginning of the analysis section. For ARB/ARS mission details see U.S. Department of the Army, FM 3-04.126, *Attack Reconnaissance Helicopter Operations*, Washington, DC: Government Printing Office, February 16, 2007, 1-1.

¹⁰⁵Email correspondence with the author, March 22, 2013.

¹⁰⁶Sgt. Matthew Jones, “50th Birthday Celebrated with a Combat Patch,” *National Guard (Arlington)*, June 1, 2009. <http://www.nationalguard.mil/news/archives/2009/06/060309-birthday.aspx> (accessed March 25, 2013). The only female to command a CAB, who is also the second female to ever command a brigade in combat, is COL (ret) Teresa Gallagher, who commanded 28 CAB serving in Multinational Division South (MND-S) in Iraq in 2009; Also see, Rachel Martin, “A Lonely Club for Women in Top Army Jobs,” *National Public Radio (NPR)*, February 25, 2011. <http://www.npr.org/2011/02/25/134025084/a-lonely-club-for-women-in-top-army-jobs> (accessed March 20, 2013).

¹⁰⁷Lester L. Lyles *The Active-Duty Officer Promotion and Command Selection Processes: Considerations for Race/ethnicity and Gender*, Arlington, VA: Military Leadership Diversity Commission (MLDC), November 2010, 66-70.

outside of the discourse on physical limitations, female performance during the Global War on Terrorism, with statistical focus in both Operation Enduring Freedom and Operation Iraqi Freedom, will be analyzed. In an attempt to objectively quantify performance, several pieces of data are observed with less reliance on qualitative methods such as focus groups, surveys, or interviews. However, as this research seeks to provide a comprehensive examination of performance, interviews of key aviation senior leaders, that are close to the issue, are included in the annexes and are referenced throughout the research. With that said, metrics have been selected to provide statistical relevance to inform the arguments that have been identified in the literature review addressing: physical implications, health concerns, risk of kill or capture, psychological issues, force readiness, and unit cohesion.

Limitations and Areas for Further Research

Based on the limited scope of this research as well as the availability of accessible data, there are several areas that will not be visited, here but further study would greatly enhance the discussion of this topic. Air Force, Navy, and Marine female fighter pilots are not considered for this research both for considerations of time and length. Additionally, their perceived risk as front-line direct combat soldiers is mitigated by their altitude when on their mission profile – which is well above the capability of the insurgent threat to engage with their almost exclusive use of small arms, heavy machine guns, or rocket propelled grenades (RPG).

When possible, based on availability of data, a specific look was taken at female AH-64 pilots broken down by theater, Iraq vs. Afghanistan.¹⁰⁸ If data specificity was not available, larger sampling sizes were utilized of either all female pilots or simply, female soldiers in a combat theater.

¹⁰⁸ Aviation corresponds with Military Occupational Specialty (MOS) 15 series or 152 series, for branch officers or warrant officers, respectively.

Lastly, while there may be many parallels and similarities in issues with the integration of women in ground combat arms units and women in attack aviation, there is not one-to-one correlation in circumstances and issues that may be faced. As was indicated by both the 160th SOAR and Army Special Operations Aviation Command (ARSOAC) commanders, there is a distinct difference in skill sets, physical attributes, mission sets, and cultures among the different closed specialties that defy a singular panacea for successful integration.¹⁰⁹

ANALYSIS

This analysis will be structured to provide a more focused and detailed context when looking at women's performance in the Global War on Terror. Initially, a brief discussion of the role of attack aviation as it pertains to the mission sets that are being conducted within both Iraq and Afghanistan will segue into a statistical examination of women's performance by theater. As data is available, details are broken out between Operations Iraqi Freedom and Enduring Freedom. Specifically, the metrics which will be examined are: injuries, casualties, prisoners of war (POW), aircraft accidents, mental health issues, and sexual harassment/assault incidents. These metrics correlate with six major areas of discussion with the caveat that force readiness issues will be consolidated in discussions of health issues.

Role of Attack Aviation

Attack rotary wing aviation has several tasks that comprise its core competencies which qualify it as a direct combat unit. These tasks are very similar to their ground infantry counterparts, but expanded to account for enhanced capability of destructive firepower, range, speed, and maneuverability that the AH-64 Apache brings to the fight. Based on the lower flight profiles during combat missions that remain within shoulder fired rockets, heavy machine gun,

¹⁰⁹See Annex B and C.

and even small arms ranges, it is evident that by either the DoD definition or Army definition attack aviation units are involved in direct combat and as such, are direct combat units.

The Attack Reconnaissance Battalion (ARB) is comprised of three maneuver / line companies each consisting of eight AH-64 aircraft. As outlined in the FM 3-04.126, the primary missions of the ARB are to conduct Reconnaissance, Security, Attack, and Movement to contact.¹¹⁰ Doctrinally, ARBs are often the division's primary reconnaissance asset during both offensive and defensive operations and complement the armor and lethality of forces in close combat. But in practice, ARBs have been broken down and managed by two aircraft teams, referred to as an Air Weapons Team (AWT), Combat Air Patrol (CAP), or Armed Reconnaissance Patrol (ARP). During both OIF and OEF, a battalion is often managed as nine distinct AWTs that are often assigned to support operations throughout the entire depth and breadth of the combined joint operating area (CJOA).¹¹¹

Quantitative Data on Women in Combat

Physical

It is relevant to note that there is a physical element to conducting aviation missions in a combat theater. While the personnel protective equipment (PPE) requirements are not as heavy as the combat gear required by Infantry or Military Police, the Air Warrior system is a many layered system that has a minimum weight of anywhere from 32 to 37 pounds, according to Project Manager (PM) Air Warrior.¹¹² When adding the magazines and ammunition as well as the flight

¹¹⁰U.S. Department of the Army, FM 3-04.126, *Attack Reconnaissance Helicopter Operations*, Washington, DC: Government Printing Office, 16 February 2007, 1-4.

¹¹¹CJOA refers to two or more allies operating with two or more services within a defined battlespace.

¹¹²Email correspondence with PM Air Warrior, February 26, 2013. PM Air Warrior is a subordinate office to the Program Executive Office (PEO) Soldier who is tasked by the Army with the mission to develop, acquire, field and sustain affordable integrated state of the art equipment to improve

helmets and, depending on the mission profile, night vision goggles and battery packs for night missions, it can quickly reach 50 - 60 pounds of weight in an extremely confined environment for continuous missions of 6 - 8 hours. These weight factors are not given gender specific considerations during the development and acquisition process, nor has the research indicated that there is any issues that have arisen to merit consideration of physical limitations of female versus male pilots. However, these weight factors also become relevant when looking at the specifics of injuries among helicopter pilots.

Health Concerns

There are three areas are examined here that address health concerns both pilots and femal soldiers in general. They are: injuries resulting from performance of duties as a helicopter pilot (theater nonspecific), common injuries suffered by women in combat, and injuries sustained in a combat theater that result days lost, which affects force readiness.

During the course of normal performance of flight duties, a surprising number of pilots report suffering from some form of neck, back, and leg pain.¹¹³ These injuries are attributed to a combination of several factors: whole-body vibration (WBV) caused by the airframe, use of night-vision goggles (NVG), helmet-mounted displays (HMD) in the AH-64, and poor cockpit sitting posture — commonly referred to as “helo hunch.” An online DoD survey of roughly 10,000 U.S. helicopter pilots conducted in 2010 indicated that self-reported neck, back, and leg pain related to flight was reported by 85% of personnel surveyed. Nearly 25% of active and reserve component, and 23% of prior service veterans, responded that they experienced neck pain

Soldier dominance in Army operations today and in the future.; Also reference, PEO Soldier Homepage, <https://peoSoldier.army.mil/aboutus/mission.asp>, and Appendix B.

¹¹³Cpt Jameel Adam, *Results of NVG-Induced Neck Strain Questionnaire Study in CH-146 Griffon Aircrew* (Toronto, Canada: Defence R&D Canada, November 2004), i, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA436290> (accessed March 30, 2013).

or discomfort more than once per week while flying. But what is critical to highlight is that 62% of the respondents currently serving in the military either avoided seeking medical attention or sought out treatment from civilian doctors for fear of being grounded or losing their flight status.¹¹⁴ The data does not indicate any statistical proclivity for women to suffer more of these injuries versus men – but it does highlight that height in male pilots is a positive predictor for onset of lower back pain.¹¹⁵ However, the reluctance of pilots to report medical conditions does cast doubt on the validity of any data on injuries to pilots as a realistic sampling.

When looking at female health concerns within a combat theater, overall the conditions that were most common among females after repeat deployments included: mental disorders (including PTSD), headache, neck and back disorders, and some female reproductive system and respiratory disorders.¹¹⁶ With respect to the specifics of musculoskeletal disorders as highlighted in the literature review, the figure below shows that the highest incidence of issues involve joint and back disorders, affecting anywhere from 20% to 16% of the population, respectively, increasing with multiple deployments.¹¹⁷

¹¹⁴Bjorn Ang and Karin Harms-Ringdahl, “Neck Pain and Related Disability in Helicopter Pilots: A Survey of Prevalence and Risk Factors,” *Aviation, Space, and Environmental Medicine* 77, no. 7 (July 2006): 713.

¹¹⁵Data references a 2013 study released on over 1,000 U.S. Navy helicopter pilots. C.A. Orsello, A.S. Phillips, and G.M. Rice, “Height and In-Flight Low Back Pain Association Among Military Helicopter Pilots,” *Aviation, Space, and Environmental Medicine* 84, no. 1 (January 2013): 32.

¹¹⁶U.S. Armed Forces Health Surveillance Center, “Health of Women After Wartime Deployments: Correlates of Risk for Selected Medical Conditions Among Females After Initial and Repeat Deployments to Afghanistan and Iraq, Active Component, U.S. Armed Forces,” *Medical Surveillance Monthly Report* 19, no. 7 (July 2012): 2, http://www.afhsc.army.mil/viewMSMR?file=2012/v19_n07.pdf (accessed April 1, 2013).

¹¹⁷For additional specifics on non battle related musculoskeletal injuries resulting in medical evacuation from combat, see Appendix G.

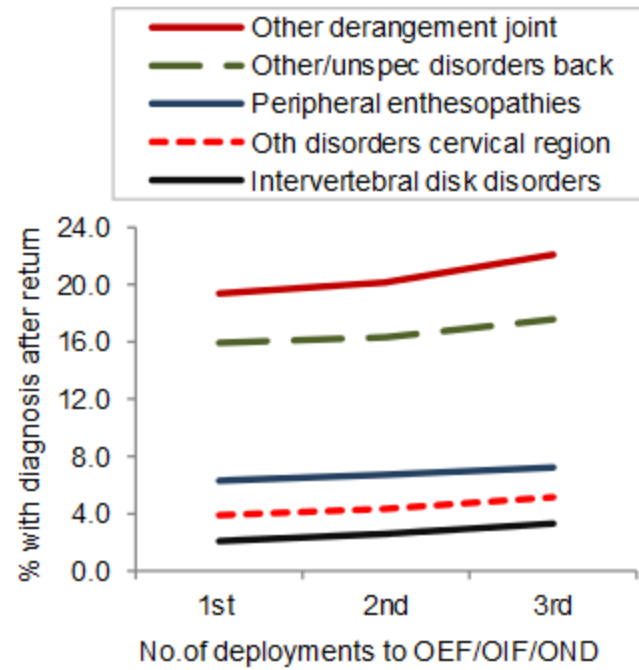


Figure 3. Musculoskeletal Conditions Among Deployed Female Soldiers, 2001 – 2011.

Source: AFHSC¹¹⁸

¹¹⁸Ibid., 8.

Table 3. Primary Diagnosis Groups by Gender for All Soldiers Air Evacuated from CENTCOM, OIF-OND/OEF (Army) 2001-2011

DIAGNOSIS GROUP	WOMEN		MEN		WOMEN	MEN	TOTAL
	# Cases	Percent	# Cases	Percent	(% of total cases)		
Non-Battle Injury	1,872	23.1%	19,245	34.8%	8.9%	91.1%	100.0%
Genitourinary	1,357	16.7%	1,741	3.1%	43.8%	56.2%	100.0%
Mental Health	1,026	12.6%	5,297	9.6%	16.2%	83.8%	100.0%
Ill-Defined conditions	940	11.6%	4,548	8.2%	17.1%	82.9%	100.0%
Digestive	401	4.9%	3,313	6.0%	10.8%	89.2%	100.0%
Nervous system & sensory	314	3.9%	1,945	3.5%	13.9%	86.1%	100.0%
Other musculoskeletal	221	2.7%	1,225	2.2%	15.3%	84.7%	100.0%
Neoplasms	219	2.7%	666	1.2%	24.7%	75.3%	100.0%
Battle Injury	218	2.7%	10,651	19.3%	2.0%	98.0%	100.0%
Endocrine	213	2.6%	798	1.4%	21.1%	78.9%	100.0%
Respiratory	195	2.4%	869	1.6%	18.3%	81.7%	100.0%
Circulatory	169	2.1%	1,859	3.4%	8.3%	91.7%	100.0%
Skin	120	1.5%	723	1.3%	14.2%	85.8%	100.0%
Infection & parasitic	58	0.7%	800	1.4%	6.8%	93.2%	100.0%
Other & Unknown	796	9.8%	1,621	2.9%	32.9%	67.1%	100.0%
TOTAL	8,119	100.0%	55,301	100.0%	---	---	---

Source: Injury Prevention Program, Army Institute of Public Health.¹¹⁹

The last area observed is sport type injuries that result in days lost, which correlates to the debate of whether women are more prone to injury in the pursuit of their fitness goals. Here, sport type injuries refer to participation in sports, recreational activities, and weight lifting activities which result in an injury that leads to loss of the injured soldier from duty. As Table 4 indicates, in the most statistically significant category, injuries resulting in loss between one and thirty days of duty, women comprise 17% of injuries. This is slightly more than their population representation of 11% within the combat theaters, as was noted earlier in the literature review.

¹¹⁹Injury Prevention Program, U.S. Army Institute of Public Health, *Deployment Injury Surveillance: Leading Causes of Non-Battle Injuries Requiring Medical Air Evacuation from Centcom (Army, 2001-2011)* (Aberdeen Proving Ground, MD: Public Health Command, April 2, 2013), 4.

The more serious injuries that result in 61 or more days of absence, 102 men compared to 14 females, brings that percentage down to 13%. But given the small sampling size it is difficult to make a definitive statement regarding injury trends other than consideration that the eleven year time frame of this data would indicate that only a small percentage of soldiers will suffer from non-battle injuries resulting in a significant number of days lost.

Table 4. Combat Soldiers Injured in Sport Type Accidents, FY02 - FY13

SOLDIERS INJURED IN SPORT TYPE ACCIDENTS IN THEATER (ARMY – ACTIVE AND RESERVE COMPONENT) FY02-PRESENT*				
DAYS LOST CATEGORY	FEMALE		MALE	
	#	PERCENT	#	PERCENT
1-30	864	17%	4270	83%
31-60	59	18%	273	82%
61-90	9	13%	59	87%
91-120	4	17%	20	83%
121-150	---	0%	5	100%
151-180	1	6%	15	94%
>180	---	0%	3	100%
Total Days Lost	937	17%	4645	83%

Source: CRC. Note: As of March 5, 2013.

Risk of Kill or Capture

As was highlighted in the literature review, there is a perception that indicates the risk of death or capture of female soldiers in combat is socially unacceptable on a national scale. However, in January of this year, a Gallup poll indicated that almost three-quarters of Americans say that, given the opportunity, they would vote "for" allowing women to serve in combat

roles.¹²⁰

Indicated in the tables below we see the breakouts for women KIA and WIA between Iraq and Afghanistan. For the Iraq theater, women comprised 2% of total Army deaths, and 2.9% of aviation specific deaths. The numbers increase when describing WIA populations, comprising 2.5% of the total Army and 5.8% of pilots, as indicated in Table 5 below.

Table 5. Total OIF Casualties (KIA/WIA)

OPERATION IRAQI FREEDOM		FEMALE	MALE	TOTAL
KIA	ARMY ACTIVE DUTY	36	1,962	1,998
	ARMY NATIONAL GUARD	8	357	365
	ARMY RESERVE	6	167	173
	ARMY TOTAL	50	2,486	2,536
	ARMY ENLISTED	44	2,250	2,294
	ARMY OFFICER	6	236	242
	ARMY AVIATION TOTAL	2	45	47
	ARMY AVIATION ENLISTED	1	11	12
	ARMY AVIATION OFFICER	1	34	35
	DOD TOTAL	61	3,419	3,480
WIA	ARMY ACTIVE DUTY	352	16,072	16,424
	ARMY NATIONAL GUARD	100	4,013	4,113
	ARMY RESERVE	94	1,569	1,663
	ARMY TOTAL	546	21,654	22,200
	ARMY ENLISTED	509	20,301	20,810
	ARMY OFFICER	37	1,353	1,390
	ARMY AVIATION TOTAL	6	100	106
	ARMY AVIATION ENLISTED	3	51	54
	ARMY AVIATION OFFICER	3	49	52
	DOD TOTAL	624	31,165	31,789

Source: DMDC, CTS Casualty File. Note: As of March 5, 2013.

Closer examination of the statistics for AH-64 pilots is indicated in Table 5 below. What

¹²⁰ Alyssa Brown, "Americans Favor Allowing Women in Combat," Gallup Politics, <http://www.gallup.com/poll/160124/americans-favor-allowing-women-combat.aspx> (accessed March 22, 2013).

is key to highlight is that all the data listed concerns male pilots only, as there have been no female pilots killed or wounded in action during Operation Iraqi Freedom. Similarly, there have been no female attack pilots that have served as prisoners of war in this theater.

Table 6. AH-64 Pilot Casualties for OIF

AH-64 PILOT CASUALTIES TOTAL FOR OIF		
KIA	ARMY ACTIVE DUTY	10
	ARMY RESERVE	2
	TOTAL	12
WIA	ARMY ACTIVE DUTY	5
	ARMY NATIONAL GUARD	2
	ARMY RESERVE	2
	TOTAL	9

Source: DMDC, CTS Casualty File. *Note:* As of March 5, 2013.

For the Afghanistan theater, women comprised 1.6% of total Army deaths, and 2.1% of aviation specific deaths. Like Iraq, the numbers increase when describing WIA populations, comprising 2.1% of the total Army and 3.8% of pilots, as indicated in Table 7.

Table 7. Total OEF Casualties (KIA/WIA)

OPERATION ENDURING FREEDOM		FEMALE	MALE	TOTAL
KIA	ARMY ACTIVE DUTY	13	1,013	1,026
	ARMY NATIONAL GUARD	4	151	155
	ARMY RESERVE	2	35	37
	ARMY TOTAL	19	1,199	1,218
	ARMY ENLISTED	16	1,069	1,085
	ARMY OFFICER	3	130	133
	ARMY AVIATION TOTAL	1	46	47
	ARMY AVIATION ENLISTED	0	22	22
	ARMY AVIATION OFFICER	1	24	25
	DOD TOTAL	23	1,695	1,718
WIA	ARMY ACTIVE DUTY	202	10,550	10,752
	ARMY NATIONAL GUARD	34	1,526	1,560
	ARMY RESERVE	31	434	465
	ARMY TOTAL	267	12,510	12,777
	ARMY ENLISTED	243	11,603	11,846
	ARMY OFFICER	24	907	931
	ARMY AVIATION TOTAL	15	110	125
	ARMY AVIATION ENLISTED	13	59	72
	ARMY AVIATION OFFICER	2	51	53
	DOD TOTAL	321	17,941	18,262

Source: DMDC, CTS Casualty File. Note: As of March 5, 2013.

Closer examination of the statistics for AH-64 pilots is indicated in Table 8 below. As was evinced in Iraq, all the data listed concerns male pilots only, as there have been no female pilots killed or wounded in action during Operation Enduring Freedom. And likewise, there have been no female attack pilot prisoners of war in this theater.

Table 8. AH-64 Pilot Casualties for OEF

AH-64 PILOT CASUALTIES TOTAL FOR OEF		
KIA	ARMY ACTIVE DUTY	2
	ARMY RESERVE	0
	TOTAL	2
WIA	ARMY ACTIVE DUTY	5
	ARMY NATIONAL GUARD	0
	ARMY RESERVE	0
	TOTAL	5

Source: DMDC, CTS Casualty File. *Note:* As of March 5, 2013.

Lastly, a look at the data on aircraft accidents is useful to make an assessment of performance of female pilots. As the data in the table below highlights, in general, women are involved in less aircraft accidents than all male crews - comprising only 3% of incidents. As women comprise roughly 10% of all aviators, the evidence suggests that women may operate aircraft more safely. As it pertains to just AH-64 aircraft, 100% of all accidents, both in garrison and in theater, involve all male crews, at least suggesting that female attack pilots may be even more safe in the performance of flight duties.

Table 9. Soldiers Injured in Army Aviation Accidents, FY02 - FY13

SOLDIERS INJURED IN ARMY AVIATION ACCIDENTS FY02- FY13								
AIRCRAFT	TOTAL ARMY				IN THEATER ONLY			
	FEMALE		MALE		FEMALE		MALE	
	#	PERCENT	#	PERCENT	#	PERCENT	#	PERCENT
AH-64A	0	0%	33	100%	0	0%	17	100%
AH-64D	0	0%	52	100%	0	0%	31	100%
CH-47D	5	5%	101	95%	4	5%	84	95%
CH-47F	1	5%	18	95%	1	5%	18	95%
HH-60L	1	17%	5	83%	1	17%	5	83%
OH-58DI	1	11%	8	89%	1	25%	3	75%
OH-58DR	2	3%	59	97%	2	5%	42	95%
UH-1H	1	25%	3	75%	0	---	0	---
UH-1V	1	25%	3	75%	0	---	0	---
UH-60A	3	4%	80	96%	2	4%	52	96%
UH-60L	4	3%	130	97%	2	3%	73	97%
TOTAL	19	3%	607	97%	13	3%	383	97%

Source: CRC. Note: As of March 18, 2013.

Psychological

Mental Health Issues

Studies conducted on GWOT veterans serving in the Middle East suggest that anywhere from 10-18% of soldiers are likely to suffer from PTSD after redeployment. However, PTSD is only one of several mental health issues that returning soldiers are at risk for. A range of research indicates numbers anywhere from 3% - 25% of troops returning from combat are likely to suffer from depression and conflict issues.¹²¹ Between 2001 and 2011, of the 1.2 million soldiers

¹²¹Brett T. Litz and William E. Schlenger, "PTSD in Service Members and New Veterans of the Iraq and Afghanistan Wars," *PTSD Research Quarterly* 20, no. 1 (Winter 2009): 3, <http://www.ptsd.va.gov/professional/newsletters/research-quarterly/V20N1.pdf> (accessed March 31, 2013).

deployed, just over 6,300 (.5%) were medically evacuated from theater.¹²²

In 2004, the Pentagon's second Mental Health Advisory Team, or MHAT-II, looked at rates of psychological injury in a war zone. Surprisingly, depression, anxiety and PTSD struck male and female soldiers almost equally, 13 percent of men and 12 percent of women.¹²³ This coincides with another recent study conducted by the Boston University School of Medicine that found similar conclusions indicating that female soldiers may be as resilient to combat stress as men. The study analyzed a representative sample of male and female soldiers that had recently returned from a deployment in support of either OIF or OEF within the past year. Specifically, the report determined that “as expected, women reported slightly less exposure than men to most combat-related stressors, but higher exposure to other stressors (i.e., prior life stress, deployment and sexual harassment).”¹²⁴ However, between men and women with similar levels of post traumatic stress severity, men tended to report emotional numbing, hypervigilance, and more frequent nightmares, whereas females showed a propensity to report more frequent concentration difficulties and distress from reminders.¹²⁵ The figure below shows more detail of specific mental health issues that women are likely to experience upon return from deployment, with adjustment reaction and anxiety diagnosis affecting 5% and 7% of the population, respectively.

¹²²Extrapolated from Table 3 and Appendix G.

¹²³Henderson, “Ready to Kill,” 7.

¹²⁴Dwane Vogt et al., “Gender Differences in Combat-Related Stressors and Their Association with Postdeployment Mental Health in a Nationally Representative Sample of U.S. OEF/OIF Veterans,” *Journal of Abnormal Psychology*, <http://www.apa.org/pubs/journals/releases/abn-120-4-797.pdf> (accessed March 21, 2013).

¹²⁵Matt W. King et al., “Gender Differences in Posttraumatic Stress Symptoms Among Oef/oif Veterans: An Item Response Theory Analysis,” *Journal of Traumatic Stress* (March 22, 2013): under “Abstract,” <http://www.ptsd.va.gov/professional/newsletters/research-quarterly/V20N1.pdf> (accessed March 31, 2013).

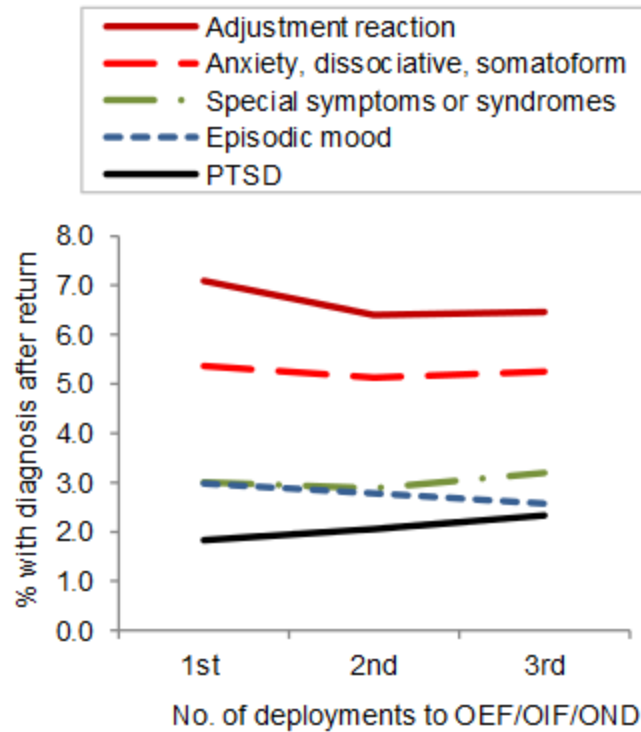


Figure 4. Mental Health Issues Among Deployed Female Soldiers, 2001 – 2011.

Source: AFHSC¹²⁶

What is pertinent to note is that between 2001 and 2011, of the roughly 6,300 cases of mental health issues that resulted in medical evacuation from theater, 16.2% were women. When compared to the 12% of the total population of deployed soldiers, this indicate a slightly higher propensity for women to suffer mental health issues.

Suicides

Since 2010, suicide has been the second leading cause of death among U.S Service Members, exceeded only by war injuries.¹²⁷ In 2012, that statistic has changed and more soldiers

¹²⁶AFHSC, “Health of Women After Wartime Deployments,” 8.

¹²⁷U.S. Armed Forces Health Surveillance Center, “Deaths by Suicide While On Active Duty,

took their own lives than died in combat.¹²⁸ Army suicides have increased by at least 54 percent since 2007 when there were 115 — the highest death toll up until that point.¹²⁹ In 2011, direct combat experience was reported for 44 suicide incidents (15.33%) and 158 suicide attempts (16.90%) which indicates that the majority of suicide attempts were not related to stressors induced through coping with direct combat missions.¹³⁰

As we look at women in the service, female service members accounted for 5.3% of suicides and 26.5% of suicide attempts in 2011 throughout the DoD.¹³¹ As we look at U.S. Army specific data, we can see that females have averaged 5.2% of total suicides and 4.9% of deployment suicides since 2008. This data demonstrates that statistically, women are far less likely than men to commit suicide.

Active and Reserve Components, U.S. Armed Forces, 1998-2011,” *Medical Surveillance Monthly Report* 19, no. 6 (June 2012): 7, http://www.afhsc.army.mil/viewMSMR?file=2012/v19_n06.pdf (accessed April 1, 2013).

¹²⁸Bill Briggs, “The Enemy Within: Soldier Suicides Outpaced Combat Deaths in 2012,” *NBC News*, January 3, 2013. http://usnews.nbcnews.com/_news/2013/01/03/16309351-the-enemy-within-Soldier-suicides-outpaced-combat-deaths-in-2012?lite (accessed April 1, 2013).

¹²⁹Ibid. 2012 Suicide rates are projected to be 177 for the Army, and as of March 1, 2013, the CY 2012 YTD numbers are: 350 suicides, 291 are confirmed and 59 are pending official verification. House Committee on Subcommittee on Military Personnel of the House Armed Services Committee, *Update on Military Suicide Prevention*, 113th Cong., 1st sess., 2013, H. Hrg. 113-AS02-TTF, 1.

¹³⁰Ibid., 4.

¹³¹David D. Luxton, Ph.D. et al., *Department of Defense Suicide Event Report (DoDSER) Calendar Year (CY) 2011 Annual Report* (Washington, D.C.: Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, April 26, 2012), 2, https://t2health.org/sites/default/files/dodser/DoDSER_2011_Annual_Report.pdf (accessed April 1, 2013).

Table 10. U.S. Army Suicide Rates

U.S. ARMY SUICIDES - TOTAL								
GENDER	2011		2010		2009		2008	
	#	PERCENT	#	PERCENT	#	PERCENT	#	PERCENT
MALE	156	93.4%	151	94.4%	159	97.0%	132	94.3%
FEMALE	11	6.6%	9	5.6%	5	3.0%	8	5.7%
U.S. ARMY SUICIDES - OEF/OIF/OND								
GENDER	2011		2010		2009		2008	
	#	PERCENT	#	PERCENT	#	PERCENT	#	PERCENT
MALE	28	96.6%	29	96.7%	38	97.4%	35	89.7%
FEMALE	1	3.4%	1	3.3%	1	2.6%	4	10.3%

Source: Extrapolated from DoDSER Annual Reports CY2008 – 2011.

Unit Cohesion

As indicated earlier in the literature review, there are two types of cohesion: social cohesion - which refers to the nature and quality of the emotional bonds of friendship and closeness among group members, and task cohesion - which identifies the shared commitment among members to achieving a goal that requires the collective efforts of the group.¹³² What the literature indicates is that high levels of social cohesion actually have negative effects that impact unit performance when personal relationships are prioritized over accomplishment of mission objectives. This line of thought is what led the Army's restrictive fraternization policy between officers and enlisted personnel.¹³³

Sexual Harassment/Assault

With regard to sexual harassment and assault, there is also a negative psychological effect

¹³²Harrell and Miller, *New Opportunities for Military Women: Effects Upon Readiness, Cohesion, and Morale*, 54.

¹³³Ibid.

of unit cohesion that can contribute to occurrence and the victim's post-trauma adjustment. Often, divulging any negative information about a fellow soldier that leads to conflict or discipline among the organization is often viewed as taboo.¹³⁴

When considering the data, it is interesting to note that sexual harassment is not a gender specific event as 12% of males were the victims of sexual harassment across all services, per the 2011 DoD Annual Report of Sexual Harassment in the Military.¹³⁵ For the Army specifically, this shows a trend from the 2010 data where 92% of all cases were women is now down to 87%. Given that male soldiers are half as likely to report being a victim of sexual assault, we can draw the conclusion that either more assaults are happening or more soldiers are deciding to come forward. Additionally, the statistics show that rape, aggravated sexual assault, and wrongful sexual contact comprise 86% of all reported cases.¹³⁶

When analyzing combat specific data, the figure below demonstrates that there was a spike in sexual assaults that peaked in 2010 and is beginning to decline – though, the rates of assault are the second highest within this eight year period. At face value, the data would suggest that incidence of sexual assault occurs less in combat, however it must be taken into consideration that only a lower incidence of reporting is occurring, based on the previously mentioned unit cohesion taboo.

¹³⁴Amy Street, PhD. and Jane Stafford, PhD., *Iraq War Clinician Guide*, 2nd ed. (Washington, D.C.: National Center for Post-Traumatic Stress Disorder, June 2004), under "Chapter 9," <http://www.ptsd.va.gov/professional/pages/military-sexual-trauma.asp> (accessed March 30, 2013).

¹³⁵Jo Ann Rooney, *Department of Defense Fiscal Year 2011 Annual Report On Sexual Assault in the Military* (Washington, D.C.: Department of Defense Office of Sexual Assault Prevention and Response, April 2012), 53, http://www.sapr.mil/media/pdf/reports/Department_of_Defense_Fiscal_Year_2011_Annual_Report_on_Sexual_Assault_in_the_Military.pdf (accessed April 1, 2013).

¹³⁶*Ibid.*, Enclosure 1, 33.

Reports of Sexual Assaults (Rate/1000) ¹	CY 2004 ²	CY 2005 ²	CY 2006	FY 2007 ³	FY 2008	FY 2009	FY 2010	FY 2011
Army Rate/1000	1.1	2.0	2.8	2.6	2.6	2.6	2.5	2.5
CENTCOM Rate/1000	0.6	0.9	1.2	0.8	1.4	1.4	1.7	1.5

Figure 1: Reported Sexual Assaults in the Army – Rate/1000 (2004 - 2011)

Note 1: Includes restricted and unrestricted reports.
Note 2: Restricted reporting did not go into effect until June 2005.
Note 3: Beginning in 2007, DoD directed reporting be by fiscal year, not calendar year.

Figure 5. Reports of Sexual Assaults, Total Army vs. CENTCOM

Source: SAPRO

CONCLUSION

Review of Findings

Physical Limitations

The debate regarding the physical requirements necessary to open all combat arms positions to women is one of the most contested areas disputed. Critics point to several studies that indicate not only are women unable to perform to the same level as men, when given an opportunity to do so they do not meet the standards which has led to a politicizing of the issue under the women's equality banner which led to artificial standards being created to "level the playing field." Proponents argue that, while it may be a small population, there are women that can achieve the standard (which at times is one that even men have difficulty with), women are getting faster and stronger every generation, and in every major conflict over the past century women have successfully performed in direct combat roles.

As it pertains to aviation, there is a physical component to flying which requires wearing anywhere from 32 to 60 pounds of PPE for up to eight hours in a tightly confined space. These weight factors are not given gender specific considerations during the development and acquisition process, nor has the research indicated that there are any issues that have arisen to merit consideration of physical limitations of female versus male pilots.

Health Issues

Critics of women in combat arms present the idea that women are more prone to injuries when attempting to pursue the same levels of physical fitness standards as men and that women's hygiene issues is a significant disruption for units operating in austere environments. Proponents counter with the argument that female injury issues are often the result of improper nutrition rather than a biological propensity for injury and lack of education on available resources leads to the unnecessary disruption of unit operations in austere environments.

What the analysis indicates is that, in combat, women will suffer slightly higher injury rates for injuries resulting in a 60 day recovery or less (17% of total injuries compared to 11% of the total force), but for more serious injuries, the numbers decrease to become more representative (13% of injuries compared to 11% of the force). When looking specifically at aviation, there are three trends that are significant: 1) 85% of pilots suffer from some sort of neck, back, and leg pain, 2) taller male pilots have a higher propensity for experiencing lower back pain and, 3) most pilots will generally not report their issues for fear of losing their flight status.

Risk of Kill or Capture

While lauding the valuable contributions of women in combat over the past 12 years, critics maintain that women are not exposed to the same amount of risk as their male counterparts based on the statistic that they are 90% less likely than men to be killed. This is reinforced by a national cultural aversion within the United States to the idea of female soldiers being captured and killed. Proponents maintain that the perception of women not "pulling their weight" in combat has largely to do with the legal restrictions of being assigned to direct combat units, but even within the framework of these restrictions, women collocated with all male units are exposed to the same risk when enemies attack forward operating bases, and against IEDs and

roadside bombs, which remains the greatest threat to deployed soldiers.

The data indicates that nearly 75% of the American people support the idea of allowing women to serve in combat roles. With regard to WIA and KIA statistics, female pilots have a higher representation than the total female populations across the Army, writ large. For female attack aviators, however, that statistic is reduced to zero. When taken into consideration with the evidence that there have been no female attack aviators involved in Class A through Class C accidents, it questions the assumption that lower casualty statistics is indicative of less risk – and suggests that this specific population of females is just as capable and proficient as their male counterpart.

Force Readiness and Manning

Family/work conflicts have led to women having lower retention rates, and critics also claim that pregnancy is a serious issue with significant effects on deployment readiness. The counterargument holds that women's low retention rates as a function of family/work conflict are overrepresented, and pregnancy considerations are exaggerated and more negatively considered than other medical conditions that result in redeployment.

The data shows that roughly 7% of the women in the Army are pregnant at any given point and time, a figure that may be reasonably concluded is lower in combat theaters. With regards to deployments, women comprise approximately 13% of all cases that require medical evacuation from theater, but only comprise 9% of non-battle injury evacuations, indicating that they are less likely than men to affect force readiness and manning for injuries.

Psychological

The argument that women are not psychologically and emotionally equipped to deal with combat assigned to a potentially hypermasculine unit is countered by proponent's claims that women in the military are generally more resilient than the civilian female population and

furthermore, the women that seek to be in a direct combat unit is even more so.

A look at rates of mental health issues, which include depression, anxiety, and PTSD directly attributed to deployment, indicates that women have the same coping mechanisms as men. However, other data indicate that women had a slightly higher rate of medical evacuation from theater due to mental health issues.

Unit Cohesion

Critics maintain that bonding within all male units is essential for unit cohesion and would be severely disrupted with the introduction of women into these units, especially in a combat environment. Proponent's counter that assumption by stating that women have been serving alongside men with distinction during the past 12 years, to include collocation with closed occupational specialties.

Sexual harassment data taken in theater from 2004 to 2011 show that while sexual harassment rates in combat are on the decline now, they have been higher for the last two years than throughout the entire GWOT. Another important trend to note is that sexual harassment of male Soldiers is also on the rise, making this issue not just a women's issue.

Implications for the Future

In 1942, a young Texan farmer, standing at five feet five inches tall, was denied entry into the Marines, Navy and paratroopers for being too slight of build – a physical limitation that was reinforced when the recruit passed out during basic training while performing close order drill.¹³⁷ But this particular recruit was given a chance, and went on by become one of the most decorated infantry soldiers in the history of the Army – his name, Audie Murphy. So while the face value of being able to carry a 100 lbs. rucksack as a requirement to perform duties as an

¹³⁷ Audie Murphy, *To Hell and Back*, 1st Owl Books ed. (New York: Holt Paperbacks, 2002), 7-8.

infantry soldier makes sense, it sheds doubt on the validity of that assumption as an effective measure of performance.¹³⁸

Performance in combat is the central issue that must guide the debate of women in combat arms. However, as the research indicates, the performance of women in combat is not a problem. Both historically and more recently during the war on terror, anecdotal and statistical input conclude that women can and will continue to perform admirably in combat across a wide variety of jobs. The issue is a deeply internalized organizational culture that lies as the largest barrier to successful integration. It is a culture that presupposes women's physical inferiority and lack of psychological and emotional coping mechanisms. It is a culture that values hyper-masculinity and is resistant to change anything that would challenge long standing traditions. Traditions of the elite combat arms schools, such as Ranger School or the Special Forces Qualification Course, and the fear of a separate and lower standard in order to ensure that an appropriate percentage of females are represented in their ranks. These schools that thrive on the reputation of being the elite of the combat arms have developed physical and psychological testing metrics correlating directly to the missions that they perform. There is a very real fear that should the gate be opened to allow women to join the branch, these vaunted standards of excellence would be demeaned by the necessity to create a bifurcated standard for women – as was done for the Army with the APFT. However, the research does not indicate that if the female soldier is able to effectively perform at the male's standards, that the feelings of resentment or lack of acceptance will be an issue. The conflict will come if the standards are compromised. Therefore, there are two potential solutions that arise: either allow women that are currently a part of the closed MOSs (currently serving in supporting roles) to be competitive for senior commands in these branches - and therefore competitive more the most senior level command positions, or

2) ensure that only those females who are able meet with the male standards of performance (and not developing a separate standard) are allowed entry into these units. Both will require a shift in organizational culture of a fairly significant magnitude.

The Pentagon is firmly entrenched on a path of inclusiveness which continually opens up more positions to females. And Army Aviation seems to be living up to the official rhetoric of inclusiveness as more women are being selected for command. Barring some catastrophe which unequivocally demonstrates women failing at the opportunities they are being given integrating into all-male organizations, they will be admitted into these organizations in greater numbers. While some may call it the feminization of the service, it is in truth just a reflection of the inclusiveness of women in the civilian sector. From women's suffrage battles to inclusion into the military academies and into higher levels of national political leadership, inclusion and integration is inexorable. Arguments against the process for social and psychological have already lost their merit, which leaves just the obstinate clinging to physical disparities.

But even those arguments are contested and as women continue to evolve and become bigger, faster, and stronger. Coupled with the modernization of warfare, direct ground combat is becoming less necessary to achieve strategic goals of national policy. This is not a new argument as a Congressional Research Issue Report in 1996 highlighted:

Those who emphasize equal rights and responsibilities say women in the armed forces cannot advance to the top without combat experience... In their view, modern weapons have equalized the potential for women in combat, since wars are less likely to be fought on a hand-to-hand basis, and have made it impossible to protect women from the destructiveness of combat; in any event, properly trained women would be able to fight successfully and exempting them from combat is not fair to men.¹³⁹

But even beyond that, the U.S. cultural paradigm of women's roles is tilting more towards equality – which in the end, may make contrary arguments obsolete, regardless of their validity.

¹³⁹Burrelli, Women in the Armed Forces, 1996.

The argument is not really about women in combat. Women have been in combat and will continue to be in combat, in both combat arms as well as combat support roles. The information presented here has validated that both perceptually, from senior leaders, as well as quantifiable measures of performance of women in combat, they contribute meaningfully with a comparable level of performance as male only units. The deeper discussion revolves around breaking cultural biases throughout the armed services. The glass ceiling on women being promoted to senior leadership within the military has lived on, despite the removing restrictions nearly 50 years ago. Outspoken critics such as historian Martin Van Creveld, hold opinions of women “wrecking the military,” that may be partly internalized by some senior leadership, if promotion and command selection rates are any indicator.¹⁴⁰

The crux of the issue that lies at the core of the women in combat arms debate is not whether integrating women into closed specialties will make the units more effective. That incorrectly frames the issue. Federal law states that we cannot discriminate based on race, ethnicity, creed, or gender – among other things.¹⁴¹ Therefore, the current system in place of segregation, while achieving mission success, is doing so at the cost of legal and moral edicts. Since the U.S. military is an organization steeped in ethical and moral tradition, the issue of women serving in combat arms creates a cognitive tension across the armed forces. It is a tension with operational implications that must be resolved to ensure that U.S. military continues to fight and win our nation’s wars as the most lethal fighting force in history.

¹⁴⁰Van Creveld, “To Wreck a Military,” January 2013.

¹⁴¹Equal Employment Opportunity Center, Office of Federal Contract Compliance Programs, “Section 301 of the Notification and Federal Employee Antidiscrimination and Retaliation Act of 2002 (the No Fear Act),” Civil Rights Center, <http://www.dol.gov/oasam/programs/crc/NoFearResult.htm>. (accessed March 24, 2013). Discrimination here refers to exclusion of equality for employment consideration.

APPENDIX A – BIRTH/PREGNANCY STATISTICS FOR THE ACTIVE COMPONENT, U.S. ARMED FORCES

Source: Armed Forces Health Surveillance Center and U.S. Army G-1, Demographics¹⁴²

TABLE 1. Live births among active component women, by selected demographic and military characteristics, active component, U.S. Armed Forces, 2001-2010

	No.	%
Total	156,314	100.0
Age group		
<20	6,570	4.2
20-24	74,426	47.6
25-29	43,966	28.1
30-34	21,115	13.5
35-39	8,748	5.6
40+	1,489	1.0
Race/ethnicity		
White, non-Hispanic	74,349	47.6
Black, non-Hispanic	45,484	29.1
Other	36,481	23.3
Service branch		
Army	52,840	33.8
Navy	41,676	26.7
Air Force	47,816	30.6
Marine Corps	11,144	7.1
Coast Guard	2,838	1.8
Military status		
Enlisted (E)	137,220	87.8
Officer (O)	19,094	12.2

Figure 6. Births among DoD, with Service Component breakouts, 2001 – 2010

APPENDIX A – BIRTH/PREGNANCY STATISTICS FOR THE ACTIVE COMPONENT, U.S.

¹⁴² U.S. Armed Forces Health Surveillance Center, “Complications and Care Related to Pregnancy, Labor and Delivery, Active Component, U.S. Armed Forces, 2001-2010,” in “Women's Health Issue,” special issue, Medical.

ARMED FORCES – Continued

Table 11. Personnel Strength with Gender Breakout, U.S. Army 2001- 2010

YEAR	TOTAL STRENGTH - ACTIVE COMPONENT (ARMY)	# OF FEMALES ACTIVE DUTY (ARMY)	% OF FEMALES ACTIVE DUTY (ARMY)
2001	476,289	73,825	15.5%
2002	484,551	74,136	15.3%
2003	493,563	75,021	15.2%
2004	494,291	72,683	14.7%
2005	488,579	68,401	14.0%
2006	502,790	70,391	14.0%
2007	517,783	70,936	13.7%
2008	539,675	73,395	13.6%
2009	549,015	73,568	13.4%
2010	561,979	73,057	13.0%

Table 12. Average Personnel Strength and Pregnancy Rates, U.S. Army 2001 - 2010

YEARS	AVG. TOTAL STRENGTH ACTIVE (ARMY)	AVG. # OF FEMALES ACTIVE (ARMY)	AVG. ANNUAL # OF BIRTHS (ARMY)	% OF FEMALES PREGNANT
2001-2010	510,852	72,541	5,284	7.3%

Major Seneca Peña-Collazo (SPC): Breaking unit cohesion, sexual harassment, and pregnancy have been cited as the major barriers to integration into special operations units. What are your thoughts on these issues and how that will play out integrating females into your unit?

Colonel John Evans (JRE): Maintaining unit cohesion is a matter of setting a collaborative, cooperative and collegial climate within a command. The Army and indeed the [military] services are replete with examples of how toxic leaders can establish and nurture an environment that breaks or destroys unit cohesion. As I have approached this new initiative of integrating females into our line units, I have driven home to my battalion commanders that the tone they set within their commands will establish the bedrock of success in this endeavor. We have successfully integrated many different groups, cultures, and subsets in our Army and Night Stalker units [160th SOAR]. We use standards as our guidepost in maintaining cohesion. This begins with the Army Values and regulatory guidelines and translates down to the unit and tactical standards that appear in our unit [standard operating procedures]SOPs. In my mind there is nothing about assigning females to a well led unit which would adversely affect cohesion. The key is leadership.

Our Army and our Services have struggled with sexual harassment since the initial integration of women in our forces many years ago. Once again, leadership becomes the most important element in setting an environment for female soldier s that is welcoming and non-hostile. This gets back to rigorous enforcement of the existing standards and standing Army policy and guidance. The evolution of our [sexual harassment assault response prevention] SHARP programs has certainly been geared to get at the problem of sexual harassment and assault, and this will provide the means and mechanisms to address the threat that bad individual or collective behavior can present to unit cohesion. The importance of leadership and enforcement of existing standards cannot be overstated. Far better to establish an environment of zero tolerance for sexual harassment than to have to use the SHARP process for remediation of offenses. Once things have progressed to the point of punitive measure based on the commission of sexually discriminating offenses, you have lost the initiative. Maintaining the initiative in this endeavor is essential or unit cohesion will break down.

Admittedly I am concerned with pregnancy in our potential female force. The realities of human physiology are what they are - despite the desire of many female professionals to bear children and carry on with their lucrative and successful careers (which many do), we must be intellectually honest about what this reality means to the profession of arms. Our pilots in particular will endure a Green Platoon process that runs between 15 and 22 weeks. At the end of this time they move to their line company as a Basic Mission Qualified (BMQ) pilot. Once arriving as a BMQ in the company, they are constantly evaluated (receiving an evaluation on each flight they participate in) until achieving Fully Mission Qualified (FMQ) status. While progression timelines vary, 24 months is the general standard for progression from BMQ to FMQ. Notably in the current fiscal environment, we may see a necessary extension of that timeline based on the availability of flying hours and resources. When one considers this timeline (nearly

¹ COL John R. Evans, e-mail message to author, February 24, 2013.

three years from enrollment in Green Platoon to progression to FMQ), and the consistency of training required to maintain currency/proficiency and successfully progress (i.e. no large breaks for profiles or medical issues), then the prospect of a pregnancy that will put a female aviator out of the cockpit for up to 12 months becomes onerous. We program officers for deployment and make assumptions about their availability for external training, exercises and contingencies based on their progression to FMQ. Should a female aviator become pregnant prior to full progression to FMQ and a subsequent utilization period as an FMQ, it will place a significant strain on the company's Personnel Tempo (PERSTEMPO). In this light, a newly assigned female Night Stalker should (in my mind) make a mental commitment to forego any plan to start or increase a family for at least 5-6 years after assignment. Given instances of unintended pregnancy (despite purposeful family planning) and the desire of many women to have their families during peak childbearing years, there tends to be a natural friction point created with consistent service as a Night Stalker and the building and nurturing of a family. In the 160th we seek aviators (particularly in the Warrant Officer corps) that we expect to serve the unit for the rest of their careers. We have many Warrant Officers assigned that have 15-25 years of service as Night Stalkers. Commissioned officers are constrained in their length of service based on competing professional progression requirements, but we expect our senior leaders to come from a commissioned Night Stalker force that has a long history with the unit. For instance I held numerous positions in the 160th SOAR as a Captain, Major and Lieutenant Colonel. I was the Regiment S3, a Battalion Commander, Regiment Deputy Commander and now the Regiment Commander, and I have over 18 years of service within the Regiment. This expectation of "career service" in the 160th SOAR makes no provision for multiple year long absences from flying duties as might be present with female aviators who are growing their families. There are staff positions that exist for some Warrant Officer positions that might provide opportunity for female aviators to go through their pregnancy cycle, but they are limited and the PRIMARY (sic) mission of all 160th Warrant Officers is to serve as Fully Mission Qualified pilots in the line. This puts female aviators in a difficult position since, despite a desire to serve without getting pregnant, over the years this desire can change, family situations can mature, and birth control measure are far from perfect. The counterpoint to all of this is that some of the Regiment's most senior Warrant Officers can and have experienced long absences from the cockpit due to chronic physical issues. These instances are rare and the unit has been mostly successful in finding valuable ways for these highly trained special operators to continue to serve within our ranks. But these instances almost always present a burden on the unit, and precipitate an increase in PERSTEMPO for other aviators. I would say that female pregnancy in our officer ranks is my number one concern as we move forward with integrating women.

SPC: Will female pilots be open to assess for all airframes or would you look to incrementally fill them into the different roles?

JRE: We are currently awaiting implementing guidance from Department of the Army and the U.S. Special Operations Command. However, I am operating under the assumption that we will integrate females across all of our airframes. We have shortages across all three airframe types (A/MH-6M, MH-60, MH-47G) so I am inclined to assign female aviator candidates based on current need and their individual experience. For example, we often take AH-64 and OH-58D pilots and make them MH-60 or MH-47 pilots depending on our requirements. However, we rarely take rated UH-60 or CH-47 pilots and make them A/MH-6M pilots. For that reason I would consider it a rare exception to take a female Blackhawk or Chinook pilot and assign her to a "Little Bird" company. Aside from that consideration I see no reason that we would not assign female aviators across all of our airframe types. Female AH-64 or OH-58D pilots could then be expected to serve in any airframe type, but might be best suited to serve as Little Bird pilots.

SPC: In general, do you think Army Aviation and/or the Special Operations Aviation is better, worse, or the same since 2001 and why?

JRE: I firmly believe our Special Operations Aviation (SOA) force is better qualified, more experienced, more capable and more professional today than prior to 2001. I offer this not as a slight to those pioneers that came before the current crop of warriors, but rather as an appreciation of what the rigors of 12 years of combat have meant in the growth and evolution of the unit. Over the last 12 years, we have increased standardization across the four warfighting battalions, exposed our force to a more diverse group of supported ground forces and performed more "Real World" contingency missions than during any period in the first 20 years of our history.

Though I have not served as part of the conventional Army Aviation force since commanding an AH-64A Company in 1995, I feel confident in saying that the overall effectiveness of the larger Army Aviation Enterprise has increased over the last 12 years. I think much of this is a result of the factors I outlined above that apply to SOA, but much of it has to do with the reorganization of Army Aviation into Combat Aviation Brigades and their employment as multi-functional Task Forces in combat. I also believe the quality of our officers, [non-commissioned officers] NCOs and soldier s is better now than at any point in our Army's history. We have a more fit force, a better educated force, and by virtue of this era of persistent conflict, a more experienced force.

SPC: Just so I am clear, no females deploy on rotations with the unit?

JRE: Actually we have successfully deployed female Night Stalkers on many occasions, but because of their low density in our formations not all deployments have females on them. The first such female (a personnel specialist) deployed in 2003, and I just happened to be the Aviation Task Force Commander downrange when we deployed her. She acquitted herself well and I even reenlisted her during her deployment. We have deployed females from all MOSs in which we have them assigned: intel, logistics, personnel, resource management and flight operations specialists. Of note, although none of these females is assigned to a SOAR flight battalion, each deploys as a member of a Special Operations Aviation Battalion Task Force [SOABTF] and therefore operates as if they were a member of the battalion. To the best of my knowledge we have had no sexual assaults or harassment complaints from our females during their deployments over the last 10 years.

SPC: Do you believe that the shorter duration deployments may make a difference with potential unit cohesion/sexual harassment occurrences (3- 6 months vs. 9-12 month rotations)?

JRE: Most of our support personnel deploy for 60-120 days depending on position and strength (so that would encapsulate the females we currently employ). Our flight crews generally deploy for 30-60 days due to the stress and pressure put on them as they support the Time Sensitive Targeting [TST] mission role. Truthfully I do not know if length of rotation would present a more or less likely opportunity for sexual harassment/assault. Although the scope of your research may be limited, it might be worth your time to find data on the incidents of sexual assault/harassment downrange Army wide since 9/11, and determine if there is a corollary between time deployed and likelihood of incident. Since we are talking about females in terms of flight crew integration most of the women in this SOA population would find themselves deployed for no longer than 60 days, I would reason that reduces opportunity for sexual misconduct by any service member.

SPC: Do you believe that there is enough commonality between special operations aviation and SOF (both collectively as a unit and the individual professional) that the integration of females into your organization may serve as a useful predictor of how integration may go with the SOF ground units?

I believe that about 80% of what it means to be "SOF" has to do with mindset, approach to problems and attitude. This is why former SOF operators (Green Berets, SEALs, Special Mission Unit personnel, etc.) can so quickly adapt to our mission, and generally progress faster than their SOAR counterparts who have never served in a SOF unit. In that regard successful integration of females in the 160th SOAR could provide a useful predictor of how integration in the larger Special Operations Force might go. The other 20% of what it means to be SOF has to do with the particular skill sets, physical attributes and stamina/endurance required to accomplish the mission. These requirements for our force would not necessarily serve as predictors of how females would perform in SOF. Although it takes a great deal of stamina and endurance to conduct an 8-10 hour flight mission sitting in an aircraft cockpit conducting long range navigation, helicopter aerial refuel, threat avoidance, actions on the objective (infil and exfil) and return to staging base (that might be an afloat forward staging base), it is significantly different than the requirement to carry 40-60 pounds (or more) of body armor, ammunition, commo equipment, etc. over long distances, through breaches, up stairs, around or over vertical obstacles, etc. (you get the picture). In these areas, the sheer physique of the Special Operator has much to do with success. All of the ground "assessment tools", whether Special Forces Assessment and Selection (SFAS), Basic Underwater Demolition/SEAL (BUDS) or Special Mission Unit selection courses, have at their very core - intense physical requirements that focus on overall body strength, agility and long term endurance/stamina. Even for the most fit females (and I know many) this will be a daunting challenge. My guys [pilots] pride themselves on being in good overall physical condition. Our mantra is - "should I find myself on the ground, I never ever want to be a hindrance to the ground force mission", to wit - I'll hump my own stuff, keep up, assist in security of the overall force and be value added if I end up on the ground. But despite this level of preparation, we do not realistically expect to find ourselves in that predicament.

APPENDIX C - INTERVIEW WITH ARMY SPECIAL OPERATIONS AVIATION
COMMAND (ARSOAC) COMMANDER, BG CLAYTON M. HUTMACHER²

Major Seneca Peña-Collazo (SPC): Breaking unit cohesion, sexual harassment, and pregnancy have been cited as the major barriers to integration into special operations units. What are your thoughts on these issues and how that will play out integrating females into your unit?

Brigadier General Clayton M. Hutmacher (CMH): The Army and the nation have made a significant investment in Army Special Operations Aviation (ARSOA) both in material and personnel. ARSOA is manned by experienced and dedicated Soldiers who will conduct themselves in a professional manner. I have no doubt they will ensure female Soldiers are treated fairly and provided the same opportunities as their male counterparts. In fact, females have served in ARSOA for years with great distinction and without issue. To date females have been assigned no lower than the Regiment level. The current initiative if approved by Congress would remove any restrictions based on gender and allow us to assign females throughout ARSOA, to include our combat aircrew positions. This will be a tremendous benefit, allowing ARSOA to capitalize on the wealth of talent resident in the Army population of female aircrew members.

SPC: Do you believe that the shorter duration deployments may make a difference with potential unit cohesion/sexual harassment occurrences (2- 4 months vs. 9-12 month rotations)?

CMH: Sexual harassment is a discipline and leadership issue; not a length of tour issue. While ARSOA is certainly not immune to this very serious problem, I am confident in our established processes which are aimed to prevent it.

SPC: Do you believe that there is enough commonality between Special ops AV and SOF (both collectively as a unit and the individual professional) that the integration of females into your organization may serve as a useful predictor of how integration may go with the SOF ground units?

CMH: Yes, but only to a limited extent. While it is convenient to discuss Army SOF as one big group, the reality is ARSOF is compiled of a number of elite units with their own unique mission sets and cultures. It is dangerous to draw too many lessons from one organization and blindly apply them to another. I believe we should approach female integration to each element of ARSOF with an open mind and very few assumptions.

SPC: In general, do you think Army Aviation and/or the Special Operations Aviation is better, worse, or the same since 2001 and why?

CMH: Significantly better. Both ARSOA and conventional Army Aviation aircrews have been battle tested and hardened over nearly 12 years of combat experience. The depth of combat experience of our aircrews is unparalleled in the history of Army Aviation. Additionally, the CH-47F, MH-47G, UH-60M, MH-60M, AH/MH-6M and AH-64E have all entered the fight after

² BG Clayton M. Hutmacher, e-mail message, via USASOAC PAO, to author, March 20, 2013.

2001 and are the most capable Army aircraft ever fielded; significantly improving our ability to effectively support the Soldier /SOF Operator on the ground, even in the most challenging of environments.

APPENDIX D – INTERVIEW WITH COL JOHN W. THOMPSON, CHIEF OF STAFF ARMY
STRATEGIC STUDIES GROUP, FORMER 160TH SOAR COMMANDER

Major Seneca Peña-Collazo (SPC): What are your thoughts on the physical limitations of women vs. men – and how that translates into integrating women in combat arms?

Colonel John W. Thompson (JWT): Yes there are physical limitations, but it cannot be universally applied. There are some women that are naturally stronger, however, they represent a very small majority. You also have to take into consideration, the much younger female may be able to out-perform the much older male. The crux of this issue is what we view as "objective" standards vice "subjective" standards. The only universal "objective" standard that exists is the APFT, which is not a good indicator of overall fitness. There are units that "tailor" their standard to reflect certain mission requirements/profiles. But, the question is are they objective, or subjective. Having served in both SOA and Conventional Aviation, I can honestly say there are very capable women in the force that could do either/both missions; the key is selection criteria with clear-cut standards, and the ability to release/re-assign someone if they do not meet the standards.

SPC: Opponents of women in combat arms cite issues with pregnancy as a concern for force readiness – highlighting roughly 10% of all Army females are pregnant at any given time as well as the potential for pregnancy while on deployment resulting in having them redeploy early. What are your thoughts?

JWT: Tough one - as the current environment would never accept UCMJ action, unless under very unique circumstances. And I would submit we would never want to get to that point, because it would negatively affect command climate. This boils down to selection criteria, and the understanding /acceptance of individual responsibilities within given positions. Like all things in a marriage, pregnancy should be a well-planned event, and it is the "true" professionals that would pick the opportune time/assignment to have a child. There does need to be a cultural mindset shift in how we treat this situation.

SPC: Do you believe that increased intra-unit sexual activity would lead to dysfunctional and potentially damaging relationships which would erode esprit-de-corp?

JWT: This (and the next) is an area where UCMJ would be a viable tool if in fact the overall mission and betterment of the unit is jeopardized. During my command time (2 conventional BNs and the SOAR), I was very specific in both policy letters and counseling, as to the consequences on "any" activity that would degrade the unit's effectiveness.

SPC: Do you believe that if women were completely integrated into combat arms that there would be increased incidence of sexual harassment?

JWT: Again -- correctable through swift and justified UCMJ. But, before it ever reaches that point, there should be clear understanding on intolerance and consequences.

SPC: What is your opinion of the risk of being killed or captured that women would face if placed in direct combat positions?

JWT: This is a discussion that has to be had amongst our senior and civil leaders -- what are the sociological impacts in a situation like this. This particular question causes me to reflect back to the scene of a dead, stripped Soldier being dragged through the streets of Mogadishu during Operation Restore Hope - 1993. Can our country stomach that if it was one of our daughter's? Future environments (both combat and non-combat) in a regionally-aligned construct make this evermore concerning.

SPC: Do you believe that there is a perception of women having lower retention rates in order to depart from the service and raise a family?

JWT: I feel this will always be the case, just as a male Soldier would choose to get out to pursue another career, because he is not professionally satisfied with their job. The question is, what are we doing to retain the most qualified Soldier, and what are we doing to continuously challenge them within their area of expertise? If a female Soldier chose to get out to start/raise a family, and timed it such that it was within a reenlistment window, or the completion of a job...and she was a good Soldier, I would look to get her into the Reserve or Nat'l Guard so that she could continue to serve.

SPC: What do you think about the potential psychological impacts that women will face with joining an "all boys club" in addition to all the other previously mentioned factors with integrating into a combat arms unit.

JWT: This is as much of a challenge for the unit members as it is for the incoming member. You'll find this to be much less of an issue within units that internalize professionalism. But, preparation of the battlefield (so to speak), combined with clear policies and guidance will mitigate the psychological impacts. Oh yea -- a lot of commander face to face time with his/her unit cannot be over-emphasized enough in this situation, as well as the aforementioned subjects.

**APPENDIX E - ACTIVE DUTY ARMY COMMISSIONED AND WARRANT OFFICERS IN
AVIATION UNITS WITH GENDER BREAK OUT, 2001 TO 2012**

Source: Army Master Data File, DMDC. *Note:* As of September 2012.

	TOTAL OFFICERS					
	AVIATION ONLY			OVERALL TOTAL		
	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL
2001	107 8.06	1,220 91.94	1,327	11,038 14.53	64,948 85.47	75,986
2002	111 8.52	1,192 91.48	1,303	11,495 14.67	66,873 85.33	78,368
2003	117 8.81	1,211 91.19	1,328	11,964 14.98	67,902 85.02	79,866
2004	133 8.38	1,454 91.62	1,587	12,322 15.25	68,454 84.75	80,776
2005	182 9.74	1,687 90.26	1,869	12,442 15.32	68,766 84.68	81,208
2006	205 9.85	1,877 90.15	2,082	12,621 15.28	70,004 84.72	82,625
2007	237 9.83	2,173 90.17	2,410	12,983 15.33	71,699 84.67	84,682
2008	247 10.28	2,155 89.72	2,402	13,569 15.49	74,041 84.51	87,610
2009	248 10.03	2,225 89.97	2,473	14,346 15.80	76,449 84.20	90,795
2010	242 9.26	2,372 90.74	2,614	15,070 16.01	79,058 83.99	94,128
2011	239 9.90	2,174 90.10	2,413	15,727 16.17	81,513 83.83	97,240
2012	272 10.24	2,383 89.76	2,655	16,001 16.26	82,422 83.74	98,423

Notes:

1. These numbers reflect pilots from all U.S. Army airframes in comparison to the U.S. Army total force.

APPENDIX F - ACTIVE DUTY ARMY AH-64 COMMISSIONED AND WARRANT OFFICERS WITH GENDER BREAK OUT, 2001 TO 2012

Source: Army Master Data File, DMDC. *Note:* As of September 2012.

	WARRANT OFFICERS								
	AH-64A ATTACK PILOT			AH-64D ATTACK PILOT			TOTAL		
	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL
2001	11	740	751	8	361	369	118	4,143	4,261
2002	7	617	624	11	472	483	104	4,194	4,298
2003	7	452	459	12	647	659	114	4,519	4,633
2004	5	320	325	11	764	775	123	4,678	4,801
2005	1	137	138	12	892	904	123	4,678	4,801
2006	0	60	60	11	943	954	122	4,697	4,819
2007	0	39	39	11	881	892	114	4,509	4,623
2008	1	34	35	14	924	938	132	4,859	4,991
2009	1	28	29	17	988	1,005	134	4,939	5,073
2010	1	17	18	18	1,048	1,066	136	5,030	5,166
2011	0	12	12	23	1,075	1,098	134	4,986	5,120
2012	0	6	6	20	1,009	1,029	125	4,699	4,824

	COMMISSIONED OFFICERS								
	AH-64A PILOT			AH-64D PILOT			TOTAL		
	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL
2001	14	417	431	0	42	42	161	1,886	2,047
2002	13	348	361	0	40	40	135	1,602	1,737
2003	13	317	330	0	41	41	131	1,514	1,645
2004	11	289	300	0	47	47	142	1,814	1,956
2005	7	256	263	1	59	60	167	1,993	2,160
2006	7	225	232	3	67	70	178	1,989	2,167
2007	7	197	204	6	96	102	188	2,022	2,210
2008	5	184	189	12	126	138	192	2,096	2,288
2009	3	176	179	23	208	231	217	2,283	2,500
2010	3	169	172	27	262	289	237	2,387	2,624
2011	4	155	159	30	382	412	253	2,701	2,954
2012	2	145	147	37	436	473	279	2,905	3,184

Notes:

1. For Commissioned Officers, the MOS had to be '15A', '15B', or '15C', and the ASI had to be in one of the following: D5 = AH-64A PILOT , D7 = AH-64D PILOT
2. For Warrant Officers, the MOS had to be in one of the following: 152F = AH-64A ATTACK PILOT, 152H = AH-64D ATTACK PILOT

**APPENDIX G - ACTIVE DUTY ARMY AH-64 INSTRUCTOR PILOT/STANDARDIZATION
PILOT WITH GENDER BREAK OUT, 2001 TO 2012**

Source: Army Master Data File, DMDC *Note:* As of September 2012.

	APACHE IP/SP ONLY			TOTAL IP/SP			TOTAL WARRANT OFFICERS		
	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL
2001	3 0.77	388 99.23	391	26 1.63	1,567 98.37	1,593	788 7.04	10,401 92.96	11,189
2002	5 1.30	380 98.70	385	27 1.66	1,595 98.34	1,622	826 7.01	10,959 92.99	11,785
2003	3 0.79	378 99.21	381	22 1.33	1,632 98.67	1,654	842 7.07	11,071 92.93	11,913
2004	3 0.82	364 99.18	367	24 1.52	1,552 98.48	1,576	896 7.38	11,246 92.62	12,142
2005	1 0.30	329 99.70	330	17 1.18	1,428 98.82	1,445	950 7.74	11,326 92.26	12,276
2006	1 0.34	297 99.66	298	17 1.23	1,368 98.77	1,385	1,046 8.04	11,963 91.96	13,009
2007	1 0.36	280 99.64	281	9 0.68	1,311 99.32	1,320	1,159 8.37	12,684 91.63	13,843
2008	0 0.00	250 100.00	250	13 1.03	1,246 98.97	1,259	1,248 8.50	13,434 91.50	14,682
2009	1 0.36	273 99.64	274	19 1.30	1,443 98.70	1,462	1,351 8.90	13,825 91.10	15,176
2010	0 0.00	309 100.00	309	17 1.11	1,518 98.89	1,535	1,434 9.23	14,106 90.77	15,540
2011	2 0.67	296 99.33	298	24 1.51	1,563 98.49	1,587	1,472 9.29	14,373 90.71	15,845
2012	2 0.66	303 99.34	305	27 1.59	1,668 98.41	1,695	1,484 9.34	14,401 90.66	15,885

Notes:

1. A member was to be an Apache IP/SI if the member was a Warrant Officer with one of the following MOS/SQI combinations: 152FC, 152FF, 152FH, 152HC, 152HF, or 152HH.
2. A member was to be a IP/SI if the member was a Warrant Officer with one of the following SQI values: C, F, or H.

**APPENDIX H – STATISTICS ON COMBAT INJURIES REQUIRING MEDICAL
EVACUATION (U.S. ARMY 2001 – 2011)**

Source: Injury Prevention Program, Army Institute of Public Health.

Table 13. Distribution by Gender of Soldiers Air Evacuated from CENTCOM, OIF/OEF/OND
(Army) 2001 - 2011

GENDER	ALL DEPLOYED SOLDIERS		AIR EVACUATED SOLDIERS		
	#	PERCENT	CASES	PERCENT	RATE
WOMEN	137,962	11.5%	8,119	12.8%	58.8
MEN	1,060,445	88.5%	55,301	87.2%	52.1
Total	1,198,407	100%	63,420	100%	52.9

Table 14. Distribution of Casualty Type for Women and Men Air Evacuated from CENTCOM,
OIF-OND/OEF (Army) 2001-2011

CASUALTY TYPE	WOMEN		MEN	
	# CASES	PERCENT	# CASES	PERCENT
BATTLE INJURY	218	2.7%	10,651	19.3%
NON-BATTLE INJURY	1,872	23.1%	19,245	34.8%
ILLNESS	6,029	74.3%	25,405	45.9%
TOTAL	8,119	100%	55,301	100%

APPENDIX G – STATISTICS ON COMBAT INJURIES REQUIRING MEDICAL
EVACTUATION (U.S. ARMY 2001 – 201) - Continued

Table 15. Distribution of Injury Types by Gender for Non-battle Injuries Air Evacuated from
CENTCOM, OIF-OND/OEF (Army) 2001-2011

TYPE OF NON-BATTLE INJURY	WOMEN		MEN		WOMEN	MEN	TOTAL
	#		#				
	Cases	Percent	Cases	Percent	(% of total cases)		
Pain/Inflammation (overuse)	381	20.4%	2,967	15.4%	11.4%	88.6%	100.0%
Fracture	360	19.2%	3,929	20.4%	8.4%	91.6%	100.0%
Sprain/Strain/Rupture	196	10.5%	2,408	12.5%	7.5%	92.5%	100.0%
Dislocation	173	9.2%	2,147	11.2%	7.5%	92.5%	100.0%
Joint Derangement	166	8.9%	1,869	9.7%	8.2%	91.8%	100.0%
Other musculoskeletal conditions	137	7.3%	1,083	5.6%	11.2%	88.8%	100.0%
System wide/late effects	56	3.0%	317	1.6%	15.0%	85.0%	100.0%
Neurological	45	2.4%	506	2.6%	8.2%	91.8%	100.0%
Open Wound	28	1.5%	597	3.1%	4.5%	95.5%	100.0%
Contusion/blunt trauma	28	1.5%	331	1.7%	7.8%	92.2%	100.0%
Internal	33	1.8%	372	1.9%	8.1%	91.9%	100.0%
Burns	7	0.4%	224	1.2%	3.0%	97.0%	100.0%
Blood	7	0.4%	29	0.2%	19.4%	80.6%	100.0%
Hernia	5	0.3%	225	1.2%	2.2%	97.8%	100.0%
Amputations	3	0.2%	146	0.8%	2.0%	98.0%	100.0%
Other and unspecified	247	13.2%	2,095	10.9%	10.5%	89.5%	100.0%
TOTAL	1,872	100.0%	19,245	100.0%	---	---	---

APPENDIX G – STATISTICS ON COMBAT INJURIES REQUIRING MEDICAL
EVACUATION (U.S. ARMY 2001 – 201) - Continued

Table 16. Distribution of the Anatomical Location of Injury by Gender for Non-battle Injuries Air
Evacuated from CENTCOM, OIF-OND/OEF (Army) 2001-2011

Anatomical Location	Women		Men		Women	Men	TOTAL
	# Cases	Percent	# Cases	Percent	(% of total cases)		
Back	323	17.3%	3,300	17.1%	8.9%	91.1%	100.0%
Knee	277	14.8%	2,953	15.3%	8.6%	91.4%	100.0%
Ankle/Foot	273	14.6%	2,184	11.3%	11.1%	88.9%	100.0%
Wrist/Hand	193	10.3%	2,644	13.7%	6.8%	93.2%	100.0%
Pelvic Region/Hip	162	8.7%	480	2.5%	25.2%	74.8%	100.0%
Shoulder	123	6.6%	2,062	10.7%	5.6%	94.4%	100.0%
Neck	101	5.4%	1,042	5.4%	8.8%	91.2%	100.0%
Head/Face/Eye/Ear	85	4.5%	1,150	6.0%	6.9%	93.1%	100.0%
Arm/Elbow	69	3.7%	925	4.8%	6.9%	93.1%	100.0%
Lower Leg	39	2.1%	580	3.0%	6.3%	93.7%	100.0%
Abdomen/Chest	36	1.9%	504	2.6%	6.7%	93.3%	100.0%
Thigh	20	1.1%	183	1.0%	9.9%	90.1%	100.0%
Multiple sites	76	4.1%	812	4.2%	8.6%	91.4%	100.0%
System wide	63	3.4%	236	1.2%	21.1%	78.9%	100.0%
Other	32	1.7%	190	1.0%	14.4%	85.6%	100.0%
TOTAL	1,872	100.0%	19,245	100.0%	---	---	---

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